



09/493 795

1

SEQUENCE LISTING

<110> Watkins, Maren  
Olivera, Baldomero M.  
Hillyard, David R.  
McIntosh, J. Michael  
Jones, Robert M.

<120> Alpha-Conotoxin Peptides

<130> 2314-179.A

<140> US 09/493,795

<141> 2000-01-28

<150> US 60/118,381

<151> 1999-01-29

<160> 404

<170> PatentIn Ver. 2.0

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<213> Artificial Sequence

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<223> Description of Artificial Sequence:Alpha-Conotoxin  
Peptide Generic Formula I

<220>

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<222> (1)..(3)

<223> Xaa at residue 1 is des-Xaa, Ile, Leu or Val; Xaa  
at residue 2 is des-Xaa, Ala or Gly; Xaa at  
residue 3 is des-Xaa, Gly, Trp (D or L), neo-Trp,  
halo-Trp or any unnatural aromatic amino acid.

<220>

<221> SITE

<222> (4)..(5)

<223> N-methyl-Lys, Xaa at residue 4 is des-Xaa, Gly,  
Trp (D or L), neo-Trp, halo-Trp or any unnatural  
aromatic amino acid; Xaa at residue 5 is Glu,  
gamma-carboxy-Glu (Gla), Asp, Ala, Thr, Ser, Gly,

<220>

<221> SITE

<222> (5)..(8)

<223> Ile, Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr,  
O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr or any  
unnatural hydroxy containing amino acid; Xaa at  
residue 8 is Ser, Thr, Arg, ornithine,

<220>

<221> SITE

<222> (8)..(9)

<223> homoarginine, Lys, N,N-dimethyl-Lys, N,N,N-  
trimethyl-Lys or any unnatural basic amino acid;  
Xaa at residue 9 is Asp, Glu, Gla, Arg, ornithine,  
homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-

<220>



<221> SITE  
 <222> (9)..(11)  
 <223> Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 10 is Ser, Thr, Asn, Ala, Gly, His, halo-His, Pro or hydroxy-Pro; Xaa at residue 11 is Thr, Ser, Ala, Asp, Asn,

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 <222> (11)..(13)  
 <223> Pro, hydroxy-Pro, Arg, ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 13 is Gly, Ser, Thr, Ala, Asn,

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 <222> (13)..(14)  
 <223> Arg, ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 14 is Gln, Leu, His, halo-His, Trp (D or L), halo-Trp,

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 <222> (14)  
 <223> neo-Trp, Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr, Arg, ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, any unnatural

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 <222> (14)..(15)  
 <223> basic amino acid or any unnatural aromatic amino acid; Xaa at residue 15 is Asn, His, halo-His, Ile, Leu, Val, Gln, Arg, ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-

<220>  
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 <222> (15)..(17)  
 <223> trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 17 is des-Xaa, Val, Ile, Leu, Arg, ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any

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 <222> (17)  
 <223> unnatural basic amino acid.

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 Xaa

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 <223> Description of Artificial Sequence: Alpha-Conotoxin  
 Peptide Generic Formula II.

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 <222> (1)..(3)  
 <223> Xaa at residue 1 is des-Xaa, Asp, Glu or gamma-  
 carboxy-Glu (Gla); Xaa at residue 2 is des-Xaa,  
 Gln, Ala, Asp, Glu, Gla; Xaa at residue 3 is des-  
 Xaa, Gly, Ala, Asp, Glu, Gla, Pro or hydroxy-Pro.

<220>  
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 <222> (4)..(7)  
 <223> Xaa at residue 4 is des-Xaa, Gly, Glu, Gla, Gln,  
 Asp, Asn, Pro or hydroxy-Pro; Xaa at residue 7 is  
 Ser, Thr, Gly, Glu, Gla, Asn, Trp (D or L),  
 neo-Trp, halo-Trp, Arg, ornithine, homoarginine,

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 <222> (7)  
 <223> Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-  
 trimethyl-Lys, any unnatural basic amino acid,  
 Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr,  
 O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr or any

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 <222> (7)..(8)  
 <223> unnatural hydroxy containing amino acid; Xaa at  
 residue 8 is Asp, Asn, His, halo-His, Thr, Ser,  
 Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr,  
 O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr or any

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 <222> (8)..(10)  
 <223> unnatural hydroxy containing amino acid; Xaa at  
 residue 9 is Pro or hydroxy-Pro; Xaa at residue  
 10 is Ala, Ser, Thr, Asp, Val, Ile, Pro, hydroxy-  
 Pro, Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr,

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 <222> (10)..(12)  
 <223> O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr or any  
 unnatural hydroxy containing amino acid; Xaa at  
 residue 12 is Gly, Ile, Leu, Val, Ala, Thr, Ser,  
 Pro, hydroxy-Pro, Phe, Trp (D or L), neo-Trp,

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 <222> (12)..(13)  
 <223> halo-Trp, Arg, ornithine, homoarginine, Lys, N-  
 methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-  
 Lys, any unnatural basic amino acid or any  
 unnatural aromatic amino acid; Xaa at residue 13

<220>  
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 <222> (13)  
 <223> is Ala, Asn, Phe, Pro, hydroxy-Pro, Glu, Gla,



Gln, His, halo-His, Val, Ser, Thr, Arg,  
 ornithine, homoarginine, Lys, N-methyl-Lys, N,N-  
 dimethyl-Lys, N,N,N-trimethyl-Lys or any

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<221> SITE

<222> (13)..(14)

<223> unnatural basic amino acid; Xaa at residue 14 is  
 Thr, Ser, His, halo-His, Leu, Ile, Val, Asn, Met,  
 Pro, hydroxy-Pro, Arg, ornithine, homoarginine,  
 Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-

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<222> (14)..(15)

<223> trimethyl-Lys, any unnatural basic amino acid,  
 Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr,  
 O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr or any  
 unnatural hydroxy containing amino acid; Xaa at

<220>

<221> SITE

<222> (15)

<223> residue 15 is Asn, Pro, hydroxy-Pro, Gln, Ser,  
 Thr, Arg, ornithine, homoarginine, Lys, N-methyl-  
 Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, any  
 unnatural basic amino acid, Tyr, nor-Tyr, mono-

<220>

<221> SITE

<222> (15)..(16)

<223> halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-  
 Tyr, nitro-Tyr or any unnatural hydroxy contain-  
 ing amino acid; Xaa at residue 16 is des-Xaa,  
 Gly, Thr, Ser, Pro, hydroxy-Pro, Tyr, nor-Tyr,

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<221> SITE

<222> (16)..(17)

<223> mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr,  
 O-phospho-Tyr, nitro-Tyr or any unnatural hydroxy  
 containing amino acid; Xaa at residue 17 is des-  
 Xaa, Ile, Val, Asp, Leu, Phe, Arg, ornithine,

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<221> SITE

<222> (17)

<223> homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-  
 Lys, N,N,N-trimethyl-Lys, any unnatural basic  
 amino acid, Tyr, nor-Tyr, mono-halo-Tyr, di-halo-  
 Tyr, O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr or

<220>

<221> SITE

<222> (17)..(19)

<223> any unnatural hydroxy containing amino acid; Xaa  
 at residue 19 is des-Xaa, Gly, Ala, Met, Ser,  
 Thr, Trp (D or L), neo-Trp, halo-Trp, any  
 unnatural aromatic amino acid, Arg, ornithine,

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<221> SITE

<222> (19)..(20)

<223> homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-



Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 20 is des-Xaa, Trp (D or L), neo-Trp, halo-Trp, any unnatural

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<221> SITE

<222> (20)..(21)

<223> aromatic amino acid, Arg, ornithine, homo-arginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 21 is des-Xaa, Arg,

<220>

<221> SITE

<222> (21)

<223> ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid.

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Xaa Cys Xaa Xaa Xaa  
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<211> 28

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence:Alpha-Conotoxin Peptide Generic Formula III.

<220>

<221> SITE

<222> (1)..(3)

<223> Xaa at residue 1 is des-Xaa, Ser or Thr; Xaa at residue 2 is des-Xaa, Asp, Glu, gamma-carboxy-Glu (Gla), Asn, Ser or Thr; Xaa at residue 3 is des-Xaa, Ala, Gly, Asn, Ser, Thr, Pro, hydroxy-Pro,

<220>

<221> SITE

<222> (3)..(4)

<223> Arg, ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 4 is des-Xaa, Ala, Val, Leu, Ile, Gly, Glu, Gla, Gln,

<220>

<221> SITE

<222> (4)..(5)

<223> Asp, Asn, Phe, Pro, hydroxy-Pro or any unnatural aromatic amino acid; Xaa at residue 5 is des-Xaa, Thr, Ser, Asp, Glu, Gla, Gln, Gly, Val, Asp, Asn, Ala, Pro, hydroxy-Pro, Arg, ornithine, homo-

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<221> SITE

<222> (5)..(8)

<223> arginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys,



N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 8 is Thr, Ser, Asp, Asn, Met, Val, Ala, Gly, Leu, Ile, Phe, any unnatural

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<221> SITE

<222> (8)..(9)

<223> aromatic amino acid, Pro, hydroxy-Pro, Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr or any unnatural hydroxy containing amino acid; Xaa at residue 9 is Ile,

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<221> SITE

<222> (9)

<223> Leu, Val, Ser, Thr, Gln, Asn, Asp, Arg, His, halo-His, Phe, any unnatural aromatic amino acid, homoarginine, ornithine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, any

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<221> SITE

<222> (9)..(10)

<223> unnatural basic amino acid, Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr or any unnatural hydroxy containing amino acid; Xaa at residue 10 is Pro, hydroxy-

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<221> SITE

<222> (10)

<223> Pro, Ser, Thr, Ile, Asp, Leu, Val, Gly, Ala, Phe, any unnatural aromatic amino acid, Arg, ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino

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<221> SITE

<222> (11)

<223> acid; Xaa at residue 11 is Val, Ala, Gly, Ile, Leu, Asp, Ser, Thr, Pro, hydroxy-Pro, Arg, ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any

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<221> SITE

<222> (11)..(13)

<223> unnatural basic amino acid; Xaa at residue 13 is His, halo-His, Arg, homoarginine, ornithine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, any unnatural basic amino acid, Asn, Ala,

<220>

<221> SITE

<222> (13)

<223> Ser, Thr, Phe, Ile, Leu, Gly, Trp (D or L), neo-Trp, halo-Trp, any unnatural aromatic amino acid, Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr or any

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<221> SITE

<222> (13)..(14)

<223> unnatural hydroxy containing amino acid; Xaa at



residue 14 is Leu, Gln, Val, Ile, Gly, Met, Ala, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, Ser, Thr, Arg, homoarginine, ornithine,

<220>  
 <221> SITE  
 <222> (14)..(15)  
 <223> thine, any unnatural basic amino acid, Asn, Glu, Gla, Gln, Phe, Trp (D or L), neo-Trp, halo-Trp or any unnatural aromatic amino acid; Xaa at residue 15 is Glu, Ala, Gln, Asn, Asp, Pro, hydroxy-Pro,

<220>  
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 <222> (15)  
 <223> Ser, Gly, Thr, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, Arg, homoarginine, ornithine, any unnatural basic amino acid, Phe, His, halo-His, any unnatural aromatic acid, Leu,

<220>  
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 <222> (15)..(16)  
 <223> Met, Gly, Ala, Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr or any unnatural hydroxy containing amino acid; Xaa at residue 16 is His, halo-His, Asn, Thr,

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 <222> (16)  
 <223> Ser, Ile, Val, Leu, Phe, any unnatural aromatic amino acid, Arg, homoarginine, ornithine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, any unnatural basic amino acid, Tyr, nor-Tyr,

<220>  
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 <222> (16)..(17)  
 <223> mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr or any unnatural hydroxy containing amino acid; Xaa at residue 17 is Ser, Thr, Ala, Gln, Pro, hydroxy-Pro, Gly, Ile, Leu,

<220>  
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 <222> (17)..(18)  
 <223> Arg, ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 18 is Asn, Glu, Ala, Asp, Gly, His, halo-His, Ala, Leu,

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 <222> (18)  
 <223> Gln, Arg, ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys, any unnatural basic amino acid, Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-

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 <222> (18)..(19)  
 <223> Tyr, nitro-Tyr or any unnatural hydroxy containing



amino acid; Xaa at residue 19 is Met, Ile, Thr, Ser, Val, Leu, Pro, hydroxy-Pro, Phe, any unnatural aromatic amino acid, Tyr, nor-Tyr, mono-

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<221> SITE

<222> (19)

<223> halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr, nitro-Tyr, any unnatural hydroxy containing amino acid, Glu, Gla, Ala, His, halo-His, Arg, ornithine, homoarginine, Lys, N-methyl-Lys, N,N-

<220>

<221> SITE

<222> (21)

<223> dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 21 is des-Xaa, Gly, Asp, Asn, Ala, Ile, Leu, Ser, Thr, His, halo-His, Arg, ornithine, homoarginine, Lys, N-methyl-

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<221> SITE

<222> (21)..(22)

<223> Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 22 is des-Xaa, Gly, Glu, Gla, Gln, Trp (D or L), neo-Trp, halo-Trp, any unnatural aromatic amino acid, Arg,

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<221> SITE

<222> (22)..(23)

<223> ornithine, homoarginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 23 is des-Xaa, Ser, Thr, Val, Ile, Ala, Arg, ornithine, homo-

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<222> (23)..(24)

<223> arginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 24 is des-Xaa, Val, Asp, His, halo-His, Arg, ornithine, homoarginine, Lys, N-

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<221> SITE

<222> (24)..(26)

<223> methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 25 is des-Xaa, Asn, Pro or hydroxy-Pro; Xaa at residue 26 is des-Xaa, Arg, ornithine, homo-

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<221> SITE

<222> (26)..(28)

<223> arginine, Lys, N-methyl-Lys, N,N-dimethyl-Lys, N,N,N-trimethyl-Lys or any unnatural basic amino acid; Xaa at residue 27 is des-Xaa, Ser or Thr; Xaa at residue 28 is des-Xaa, Leu, Ile or Val.

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Xaa Xaa Xaa Xaa Xaa Cys Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa  
1 5 10 15



Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
                   20                                  25

<210> 4  
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 <212> PRT  
 <213> Conus imperialis

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 <222> (2)..(11)  
 <223> Xaa at residue 2 is Glu or gamma-carboxy-Glu; Xaa  
       at residue 11 is Lys, N-methyl-Lys,  
       N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

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 Asp Xaa Cys Cys Ser Asp Ser Arg Cys Gly Xaa Asn Cys Leu  
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 <213> Conus imperialis

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 <222> (10)  
 <223> Xaa at residue 10 is Trp (D or L) or halo-Trp.

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 Ala Cys Cys Ser Asp Arg Arg Cys Arg Xaa Arg Cys  
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 <213> Conus regius

<400> 6  
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<210> 7  
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 <213> Conus regius

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 <222> (2)  
 <223> Xaa at residue 2 is Tyr, nor-Tyr, mono-halo-Tyr,  
       di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
       nitro-Tyr.

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<210> 8



~~<400> 8  
Asp Xaa Cys Cys Arg Arg Xaa Xaa Cys Thr Leu Ile Cys  
1 5 10~~

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<210> 9
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<212> PRT
<213> Conus regius
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<222> (6)..(10)
<223> Xaa at residue 6 is Pro or hdroxy-Pro; Xaa at
      residue 10 is Tyr, nor-Tyr, mono-halo-Tyr,
      di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or
      nitro-Tyr.
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~~<400> 9  
Gly Cys Cys Ser Asp Xaa Arg Cys Arg Xaa Arg Cys Arg  
1 5 10~~

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<210> 10
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<212> PRT
<213> Conus regius
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<220>
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<222> (7)..(11)
<223> Xaa at residue 7 is Pro or hydroxy-Pro; Xaa at
      residue 11 is Trp (D or L) or halo-Trp.
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~~<400> 10  
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1 5 10~~

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<212> PRT
<213> Conus regius
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<222> (3)..(10)
<223> Xaa at residue 3 is Trp (D or L) or halo-Trp; Xaa
      at residue 9 is Glu or gamma-carboxy-Glu; Xaa at
      residue 10 is Pro or hydroxy-Pro.

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<220>



<221> SITE

<222> (15)

<223> Xaa at residue 15 is Lys, N-methyl-Lys,  
N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 11

Ile Ala Xaa Asp Ile Cys Cys Ser Xaa Xaa Asp Cys Asn His Xaa Cys  
1 5 10 15

Val

<210> 12

<211> 12

<212> PRT

<213> Conus regius

<220>

<221> SITE

<222> (6)..(9)

<223> Xaa at residue 6 is Pro or hydroxy-Pro; Xaa at  
residue 9 is Lys, N-methyl-Lys, N,N-dimethyl-Lys  
or N,N,N-trimethyl-Lys.

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Gly Cys Cys Ser Asp Xaa Arg Cys Xaa His Gln Cys  
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<210> 13

<211> 14

<212> PRT

<213> Conus sponsalis

<220>

<221> SITE

<222> (5)..(11)

<223> Xaa at residues 5 and 11 is Pro or hydroxy-Pro;  
Xaa at residue 8 is Lys, N-methyl-Lys,  
N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

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Cys Cys Ser Asp Xaa Ala Cys Xaa Gln Thr Xaa Gly Cys Arg  
1 5 10

<210> 14

<211> 13

<212> PRT

<213> Conus sponsalis

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<222> (3)..(5)

<223> Xaa at residue 3 is Glu or gamma-carboxy-Glu; Xaa  
at residue 5 is Pro or hydroxy-Pro.

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Cys Cys Xaa Asn Xaa Ala Cys Arg His Thr Gln Gly Cys  
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<210> 15



<211> 13  
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 <213> Conus sulcatus

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 <222> (4)..(12)  
 <223> Xaa at residue 4 is Trp or halo-Trp; Xaa at residue 6 is Pro or hydroxy-Pro; Xaa at residue 12 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr.

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 <211> 14  
 <212> PRT  
 <213> Conus achatinus

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 <222> (2)..(11)  
 <223> Xaa at residues 2 and 7 is Pro or hydroxy-Pro; Xaa at residue 11 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

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 <212> PRT  
 <213> Conus bullatus

<220>  
 <221> SITE  
 <222> (2)..(12)  
 <223> Xaa at residues 2 and 8 is Pro or hydroxy-Pro; Xaa at residue 12 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 17  
 Ala Xaa Gly Cys Cys Asn Asn Xaa Ala Cys Val Xaa His Arg Cys  
           1                  5                  10                  15

<210> 18  
 <211> 14  
 <212> PRT  
 <213> Conus bullatus

<220>  
 <221> SITE  
 <222> (1)..(11)  
 <223> Xaa at residues 1, 2 and 7 is Pro or hydroxy-Pro; Xaa at residue 11 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 18



Xaa Xaa Cys Cys Asn Asn Xaa Ala Cys Val Xaa His Arg Cys  
 1 5 10

<210> 19  
 <211> 16  
 <212> PRT  
 <213> Conus bullatus

<220>  
 <221> SITE  
 <222> (2)..(13)  
 <223> Xaa at residue 2 is Glu or gamma-carboxy-Glu; Xaa  
 at residue 6 is Trp or halo-Trp; Xaa at residues 8  
 11 and 13 is Pro or hydroxy-Pro.

<400> 19  
 Asp Xaa Asn Cys Cys Xaa Asn Xaa Ser Cys Xaa Arg Xaa Arg Cys Thr  
 1 5 10 15

<210> 20  
 <211> 13  
 <212> PRT  
 <213> Conus bullatus

<220>  
 <221> SITE  
 <222> (6)..(12)  
 <223> Xaa at residues 6 and 7 is Pro or hydroxy-Pro; Xaa  
 at residue 12 is Tyr, nor-Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
 nitro-Tyr.

<400> 20  
 Gly Cys Cys Ser Arg Xaa Xaa Cys Ala Val Leu Xaa Cys  
 1 5 10

<210> 21  
 <211> 13  
 <212> PRT  
 <213> Conus circumcisis

<220>  
 <221> SITE  
 <222> (6)  
 <223> Xaa at residue 6 is Pro or hydroxy-Pro.

<400> 21  
 Gly Cys Cys Gly Asn Xaa Asp Cys Thr Ser His Ser Cys  
 1 5 10

<210> 22  
 <211> 16  
 <212> PRT  
 <213> Conus stercusmuscarum

<220>  
 <221> SITE  
 <222> (6)..(11)  
 <223> Xaa at residue 6 is Pro or hydroxy-Pro; Xaa at  
 residue 11 is Glu or gamma-carboxy-Glu.



<400> 22  
 Gly Cys Cys Ser Asn Xaa Val Cys His Leu Xaa His Ser Asn Met Cys  
           1                  5                  10                  15

<210> 23  
 <211> 17  
 <212> PRT  
 <213> Conus obscurus

<220>  
 <221> SITE  
 <222> (6)..(15)  
 <223> Xaa at residue 6 is Pro or hydroxy-Pro; Xaa at  
           residue 14 is Glu or gamma-carboxy-Glu; Xaa at  
           residue 15 is Tyr, nor-Tyr, mono-halo-Tyr,  
           di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or

<220>  
 <221> SITE  
 <222> (15)  
 <223> nitro-Tyr.

<400> 23  
 Gly Cys Cys Ser Asn Xaa Val Cys Arg Gln Asn Asn Ala Xaa Xaa Cys  
           1                  5                  10                  15

Arg

<210> 24  
 <211> 18  
 <212> PRT  
 <213> Conus textile

<220>  
 <221> SITE  
 <222> (1)..(15)  
 <223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-Pro;  
           Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 24  
 Xaa Gln Cys Cys Ser His Xaa Ala Cys Asn Val Asp His Xaa Xaa Ile  
           1                  5                  10                  15

Cys Arg

<210> 25  
 <211> 18  
 <212> PRT  
 <213> Conus radiatus

<220>  
 <221> SITE  
 <222> (1)..(15)  
 <223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-Pro;  
           Xaa at residues 2 and 15 is Glu or  
           gamma-carboxy-Glu.

<400> 25  
 Xaa Xaa Cys Cys Ser His Xaa Ala Cys Asn Val Asp His Xaa Xaa Ile



15

1 5 10 15  
Cys Arg

<210> 26  
<211> 18  
<212> PRT  
<213> Conus radiatus

<220>  
<221> SITE  
<222> (1)..(15)  
<223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-Pro;  
Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 26  
Xaa Gln Cys Cys Ser His Xaa Ala Cys Asn Val Asp His Xaa Xaa Ile  
1 5 10 15

Cys Asp

<210> 27  
<211> 18  
<212> PRT  
<213> Conus omaria

<220>  
<221> SITE  
<222> (1)..(15)  
<223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-Pro;  
Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 27  
Xaa Arg Cys Cys Ser His Xaa Ala Cys Asn Val Asp His Xaa Xaa Ile  
1 5 10 15

Cys Arg

<210> 28  
<211> 18  
<212> PRT  
<213> Conus omaria

<220>  
<221> SITE  
<222> (1)..(14)  
<223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-Pro.

<400> 28  
Xaa Gln Cys Cys Ser His Xaa Ala Cys Asn Val Asp His Xaa Gly Ile  
1 5 10 15

Cys Arg

<210> 29  
<211> 18



<212> PRT  
 <213> Conus omaria

<220>  
 <221> SITE  
 <222> (1)..(15)  
 <223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-Pro;  
 Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 29  
 Xaa Gln Cys Cys Ser His Xaa Ala Cys Asn Val Asp His Xaa Xaa Thr  
           1                          5                          10                          15

Cys Arg

<210> 30  
 <211> 18  
 <212> PRT  
 <213> Conus omaria

<220>  
 <221> SITE  
 <222> (1)..(15)  
 <223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-Pro;  
 Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 30  
 Xaa Gln Cys Cys Ser His Xaa Ala Cys Asn Val Asp His Xaa Xaa Val  
           1                          5                          10                          15

Cys Arg

<210> 31  
 <211> 18  
 <212> PRT  
 <213> Conus omaria

<220>  
 <221> SITE  
 <222> (1)..(15)  
 <223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-Pro;  
 Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 31  
 Xaa Gln Cys Cys Ser His Xaa Ala Cys Asn Ile Asp His Xaa Xaa Ile  
           1                          5                          10                          15

Cys Arg

<210> 32  
 <211> 21  
 <212> PRT  
 <213> Conus omaria

<220>  
 <221> SITE  
 <222> (1)..(15)  
 <223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-Pro;



Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 32  
Xaa Gln Cys Cys Ser His Xaa Ala Cys Asn Val Asp His Xaa Xaa Ile  
1 5 10 15

Cys Arg Arg Arg Arg  
20

<210> 33  
<211> 17  
<212> PRT  
<213> Conus betulinus

<220>  
<221> SITE  
<222> (7)..(15)  
<223> Xaa at residues 7 and 14 is Pro or hydroxy-Pro;  
Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 33  
Gly Gly Cys Cys Ser His Xaa Ala Cys Ala Val Asn His Xaa Xaa Leu  
1 5 10 15

Cys

<210> 34  
<211> 16  
<212> PRT  
<213> Conus betulinus

<220>  
<221> SITE  
<222> (6)..(14)  
<223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro;  
Xaa at residue 14 is Glu or gamma-carboxy-Glu.

<400> 34  
Gly Cys Cys Ser His Xaa Ala Cys Ser Val Asn His Xaa Xaa Leu Cys  
1 5 10 15

<210> 35  
<211> 16  
<212> PRT  
<213> Conus dalli

<220>  
<221> SITE  
<222> (6)..(14)  
<223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro;  
Xaa at residue 14 is Glu or gamma-carboxy-Glu.

<400> 35  
Gly Cys Cys Ser His Xaa Ala Cys Asn Val Asp His Xaa Xaa Ile Cys  
1 5 10 15

<210> 36  
<211> 19  
<212> PRT



<213> Conus obscurus

<220>

<221> SITE

<222> (6)..(18)

<223> Xaa at residues 6 and 15 is Pro or hydroxy-Pro;  
Xaa at residue 11 is Lys, N,-methyl-Lys,  
N,N-dimethyl-Lys or N,N,N-trimethyl-Lys; Xaa at  
residues 14 and 18 is Glu or gamma-carboxy-Glu.

<400> 36

Gly Cys Cys Ser His Xaa Ala Cys Ser Gly Xaa Thr Gln Xaa Xaa Cys  
1 5 10 15

Arg Xaa Ser

<210> 37

<211> 18

<212> PRT

<213> Conus tulipa

<220>

<221> SITE

<222> (1)..(14)

<223> Xaa at residues 1, 6 and 13 is Pro or hydroxy-Pro;  
Xaa at residue 14 is Glu or gamma-carboxy-Glu.

<400> 37

Xaa Cys Cys Ser His Xaa Ala Cys Ser Gly Asn Asn Xaa Xaa Phe Cys  
1 5 10 15

Arg Gln

<210> 38

<211> 18

<212> PRT

<213> Conus tulipa

<220>

<221> SITE

<222> (6)..(14)

<223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro;  
Xaa at residue 14 is Glu or gamma-carboxy-Glu.

<400> 38

Gly Cys Cys Ser His Xaa Ala Cys Ser Gly Asn Asn Xaa Xaa Phe Cys  
1 5 10 15

Arg Gln

<210> 39

<211> 16

<212> PRT

<213> Conus pennaceus

<220>

<221> SITE

<222> (6)..(15)



<223> Xaa at residues 6, 7 and 13 is Pro or hydroxy-Pro;  
Xaa at residue 15 is Tyr, nor-Tyr, mono-halo-Tyr,  
di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
nitro-Tyr.

<400> 39  
Gly Cys Cys Ser His Xaa Xaa Cys Ala Met Asn Asn Xaa Asp Xaa Cys  
1 5 10 15

<210> 40  
<211> 16  
<212> PRT  
<213> Conus pennaceus

<220>  
<221> SITE  
<222> (6)..(15)  
<223> Xaa at residues 6, 7 and 13 is Pro or hydroxy-Pro;  
Xaa at residue 15 is Tyr, nor-Tyr, mono-halo-Tyr,  
di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
nitro-Tyr.

<400> 40  
Gly Cys Cys Ser His Xaa Xaa Cys Phe Leu Asn Asn Xaa Asp Xaa Cys  
1 5 10 15

<210> 41  
<211> 17  
<212> PRT  
<213> Conus textile

<220>  
<221> SITE  
<222> (6)..(13)  
<223> Xaa at residues 6, 7 and 13 is Pro or hydroxy-Pro;  
Xaa at residue 11 is Lys, N-methyl-Lys,  
N,N-dimethyl-Lys or N.N.N-trimethyl-Lys.

<400> 41  
Gly Cys Cys Ser Asn Xaa Xaa Cys Ile Ala Xaa Asn Xaa His Met Cys  
1 5 10 15

Gly

<210> 42  
<211> 16  
<212> PRT  
<213> Conus distans

<220>  
<221> SITE  
<222> (6)..(13)  
<223> Xaa at residues 6, 7 and 13 is Pro or hydroxy-Pro.

<400> 42  
Gly Cys Cys Ser Asn Xaa Xaa Cys Ala His Asn Asn Xaa Asp Cys Arg  
1 5 10 15

<210> 43



<211> 17  
 <212> PRT  
 <213> Conus tulipa

<220>  
 <221> SITE  
 <222> (6)..(13)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 43  
 Gly Cys Cys Ser Asn Xaa Ala Cys Ala Gly Asn Asn Xaa His Val Cys  
           1                  5                  10                  15

Arg

<210> 44  
 <211> 16  
 <212> PRT  
 <213> Conus galli

<220>  
 <221> SITE  
 <222> (6)..(13)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 44  
 Gly Cys Cys Ser Arg Xaa Ala Cys Ile Ala Asn Asn Xaa Asp Leu Cys  
           1                  5                  10                  15

<210> 45  
 <211> 20  
 <212> PRT  
 <213> Conus circumcissus

<220>  
 <221> SITE  
 <222> (6)..(14)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro;  
       Xaa at residues 11 and 14 is Glu or  
       gamma-carboxy-Glu.

<400> 45  
 Gly Cys Cys Ser Asn Xaa Val Cys His Val Xaa His Xaa Xaa Leu Cys  
           1                  5                  10                  15

Arg Arg Arg Arg  
                   20

<210> 46  
 <211> 18  
 <212> PRT  
 <213> Conus sulcatus

<220>  
 <221> SITE  
 <222> (7)..(15)  
 <223> Xaa at residues 7, 12 and 14 is Pro or  
       hydroxy-Pro; Xaa at residue 11 is Lys,  
       N-methyl-Lys, N,N-dimethyl-Lys or  
       N,N,N-trimethyl-Lys; Xaa at residue 15 is Glu or



<220>  
 <221> SITE  
 <222> (7)..(15)  
 <223> gamma-carboxy-Glu.

<400> 46  
 Gly Gly Cys Cys Ser Phe Xaa Ala Cys Arg Xaa Xaa Arg Xaa Xaa Met  
           1                  5                  10                  15

Cys Gly

<210> 47  
 <211> 18  
 <212> PRT  
 <213> Conus textile

<220>  
 <221> SITE  
 <222> (1)..(15)  
 <223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-Pro;  
       Xaa at residues 2 and 15 is Glu or  
       gamma-carboxy-Glu.

<400> 47  
 Xaa Xaa Cys Cys Ser Asp Xaa Arg Cys Asn Ser Ser His Xaa Xaa Leu  
           1                  5                  10                  15

Cys Arg

<210> 48  
 <211> 18  
 <212> PRT  
 <213> Conus dalli

<220>  
 <221> SITE  
 <222> (1)..(15)  
 <223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-pro;  
       Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 48  
 Xaa Gln Cys Cys Ser Asp Xaa Arg Cys Asn Val Gly His Xaa Xaa Leu  
           1                  5                  10                  15

Cys Gly

<210> 49  
 <211> 18  
 <212> PRT  
 <213> Conus dalli

<220>  
 <221> SITE  
 <222> (1)..(15)  
 <223> Xaa at residue 1 is Gln or pyro-Glu; Xaa at  
       residues 7 and 14 is Pro or hydroxy-Pro; Xaa at  
       residue 15 is Glu or gamma-carboxy-Glu.



<400> 49  
 Xaa Val Cys Cys Ser Asp Xaa Arg Cys Asn Val Gly His Xaa Xaa Ile  
           1                  5                  10                  15

Cys Gly

<210> 50  
 <211> 16  
 <212> PRT  
 <213> Conus textile

<220>  
 <221> SITE  
 <222> (6)..(13)  
 <223> Xaa at residues 6, 7 and 13 is Pro or hydroxy-Pro.

<400> 50  
 Gly Cys Cys Ser Arg Xaa Xaa Cys Ile Ala Asn Asn Xaa Asp Leu Cys  
           1                  5                  10                  15

<210> 51  
 <211> 18  
 <212> PRT  
 <213> Conus omaria

<220>  
 <221> SITE  
 <222> (1)..(15)  
 <223> Xaa at residues 1 and 14 is Pro or hydroxy-Pro;  
       Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 51  
 Xaa Gln Cys Cys Ser His Leu Ala Cys Asn Val Asp His Xaa Xaa Ile  
           1                  5                  10                  15

Cys Arg

<210> 52  
 <211> 19  
 <212> PRT  
 <213> Conus sulcatus

<220>  
 <221> SITE  
 <222> (5)..(14)  
 <223> Xaa at residue 5 is Tyr, nor-Tyr, mono-halo-Tyr,  
       di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
       nitro-Tyr; Xaa at residue 13 is Pro or  
       hydroxy-Pro; Xaa at residue 14 is Glu or

<220>  
 <221> SITE  
 <222> (14)..(18)  
 <223> gamma-carboxy-Glu; Xaa at residue 18 is Trp or  
       halo-Trp.

<400> 52  
 Gly Cys Cys Ser Xaa Phe Asp Cys Arg Met Met Phe Xaa Xaa Met Cys



1 5 10 15

Gly Xaa Arg

<210> 53  
 <211> 18  
 <212> PRT  
 <213> Conus sulcatus

<220>  
 <221> SITE  
 <222> (11)..(12)  
 <223> Xaa at residue 11 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys; Xaa at residue 12 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or

<220>  
 <221> SITE  
 <222> (12)..(15)  
 <223> nitro-Tyr; Xaa at residue 14 is Pro or hydroxy-Pro; Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 53  
 Gly Gly Cys Cys Ser Phe Ala Ala Cys Arg Xaa Xaa Arg Xaa Xaa Met  
 1 5 10 15

Cys Gly

<210> 54  
 <211> 20  
 <212> PRT  
 <213> Conus sulcatus

<220>  
 <221> SITE  
 <222> (7)..(15)  
 <223> Xaa at residue 7 is Pro or hydroxy-Pro; Xaa at residue 10 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residue 15 is Glu or

<220>  
 <221> SITE  
 <222> (7)..(15)  
 <223> gamma-carboxy-Glu.

<400> 54  
 Gly Gly Cys Cys Phe His Xaa Val Cys Xaa Ile Asn Leu Leu Xaa Met  
 1 5 10 15

Cys Arg Gln Arg  
 20

<210> 55  
 <211> 19  
 <212> PRT  
 <213> Conus betulinus



<220>  
 <221> SITE  
 <222> (7)..(15)  
 <223> Xaa at residues 7, 11 and 14 is Tyr, nor-Tyr,  
 mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr,  
 O-phospho-Tyr; Xaa at residues 8, 9 and 15 is Pro  
 or hydroxy-Pro.

<220>  
 <221> SITE  
 <222> (12)..(16)  
 <223> Xaa at residues 12 and 16 is Glu or  
 gamma-carboxy-Glu.

<400> 55  
 Ser Ala Thr Cys Cys Asn Xaa Xaa Xaa Cys Xaa Xaa Thr Xaa Xaa Xaa  
 1 5 10 15  
 Ser Cys Leu

<210> 56  
 <211> 17  
 <212> PRT  
 <213> Conus betulinus

<220>  
 <221> SITE  
 <222> (5)..(13)  
 <223> Xaa at residues 5 and 12 is Tyr, no-Tyr,  
 mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr,  
 O-phospho-Tyr or nitro-Tyr; Xaa at residues 6, 7  
 and 13 is Pro or hydroxy-Pro.

<220>  
 <221> SITE  
 <222> (10)..(14)  
 <223> Xaa at residues 10 and 14 is Glu or  
 gamma-carboxy-Glu.

<400> 56  
 Ala Cys Cys Ala Xaa Xaa Xaa Cys Phe Xaa Ala Xaa Xaa Xaa Arg Cys  
 1 5 10 15  
 Leu

<210> 57  
 <211> 19  
 <212> PRT  
 <213> Conus betulinus

<220>  
 <221> SITE  
 <222> (3)..(16)  
 <223> Xaa at residues 3, 12 and 16 is Glu or  
 gamma-carboxy-Glu; Xaa at residues 6, 7, 11 and 14  
 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr,  
 O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr.

<220>  
 <221> SITE



<222> (8)..(15)

<223> Xaa at residues 8, 9 and 15 is Pro or hydroxy-Pro.

<400> 57

Asn Ala Xaa Cys Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Ala Xaa Xaa Xaa  
1 5 10 15

Ile Cys Leu

<210> 58

<211> 227

<212> DNA

<213> Conus magus

<220>

<221> CDS

<222> (1)..(189)

<400> 58

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Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
1 5 10 15

ttc cct tca gat cgt gca tct gat ggc agg aat gcc gca gcc aac gac 96  
Phe Pro Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Asn Asp  
20 25 30

aaa gcg tct gac gtg atc acg ctg gcc ctc aag gga tgc tgt tcc aac 144  
Lys Ala Ser Asp Val Ile Thr Leu Ala Leu Lys Gly Cys Cys Ser Asn  
35 40 45

cct gtc tgt cac ttg gag cat tca aac ctt tgt ggt aga aga cgc 189  
Pro Val Cys His Leu Glu His Ser Asn Leu Cys Gly Arg Arg Arg  
50 55 60

tgatgctcca ggaccctctg aaccacgacg ttcgagca 227

<210> 59

<211> 63

<212> PRT

<213> Conus magus

<400> 59

Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
1 5 10 15

Phe Pro Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp  
20 25 30

Lys Ala Ser Asp Val Ile Thr Leu Ala Leu Lys Gly Cys Cys Ser Asn  
35 40 45

Pro Val Cys His Leu Glu His Ser Asn Leu Cys Gly Arg Arg Arg  
50 55 60

<210> 60

<211> 208

<212> DNA

<213> Conus aulicus



&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(168)

&lt;400&gt; 60

atg	ttc	acc	gtg	ttt	ctg	ttg	gtt	gtc	ttg	gca	acc	acc	gtc	gtt	tcc	48
Met	Phe	Thr	Val	Phe	Leu	Leu	Val	Val	Leu	Ala	Thr	Thr	Val	Val	Ser	
1				5					10					15		

ttc	act	tca	gat	cgt	gca	tct	gat	ggc	agg	aag	gac	gca	gcg	tct	ggc	96
Phe	Thr	Ser	Asp	Arg	Ala	Ser	Asp	Gly	Arg	Lys	Asp	Ala	Ala	Ser	Gly	
			20					25					30			

ctg	atc	gct	ctg	acc	atc	aag	gga	tgc	tgt	tct	tat	cct	ccc	tgt	ttc	144
Leu	Ile	Ala	Leu	Thr	Ile	Lys	Gly	Cys	Cys	Ser	Tyr	Pro	Pro	Cys	Phe	
			35				40					45				

gcg	act	aat	tca	gac	tat	tgt	ggc	tga	cgc	gct	gat	gct	ccg	gac	cct	198
Ala	Thr	Asn	Ser	Asp	Tyr	Cys	Gly									
		50				55										

accacgacgt																208
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&lt;210&gt; 61

&lt;211&gt; 56

&lt;212&gt; PRT

&lt;213&gt; Conus aulicus

&lt;400&gt; 61

Met	Phe	Thr	Val	Phe	Leu	Leu	Val	Val	Leu	Ala	Thr	Thr	Val	Val	Ser
1				5					10					15	

Phe	Thr	Ser	Asp	Arg	Ala	Ser	Asp	Gly	Arg	Lys	Asp	Ala	Ala	Ser	Gly
			20					25					30		

Leu	Ile	Ala	Leu	Thr	Ile	Lys	Gly	Cys	Cys	Ser	Tyr	Pro	Pro	Cys	Phe
			35				40					45			

Ala	Thr	Asn	Ser	Asp	Tyr	Cys	Gly
		50				55	

&lt;210&gt; 62

&lt;211&gt; 205

&lt;212&gt; DNA

&lt;213&gt; Conus aulicus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(174)

&lt;400&gt; 62

atg	ttc	acc	gtg	ttt	ctg	ttg	gtc	gtc	ttg	gca	acc	acc	gtc	gtt	tcc	48
Met	Phe	Thr	Val	Phe	Leu	Leu	Val	Val	Leu	Ala	Thr	Thr	Val	Val	Ser	
1				5					10					15		

ttc	act	tca	gat	cgt	gca	tct	gat	ggc	agg	aag	gac	gca	gcg	tct	ggc	96
Phe	Thr	Ser	Asp	Arg	Ala	Ser	Asp	Gly	Arg	Lys	Asp	Ala	Ala	Ser	Gly	
			20					25					30			

ctg	att	gct	ctg	acc	atg	aag	gga	tgc	tgt	tct	tat	cct	ccc	tgt	ttc	144
Leu	Ile	Ala	Leu	Thr	Met	Lys	Gly	Cys	Cys	Ser	Tyr	Pro	Pro	Cys	Phe	
			35				40					45				



gcg act aat cca gac tgt ggt cga cga cgc tgatgctcca ggaccctctg 194  
 Ala Thr Asn Pro Asp Cys Gly Arg Arg Arg  
           50                          55

aaccacgacg t 205

<210> 63  
 <211> 58  
 <212> PRT  
 <213> Conus aulicus

<400> 63  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
      1                  5                  10                  15  
 Phe Thr Ser Asp Arg Ala Ser Asp Gly Arg Lys Asp Ala Ala Ser Gly  
                   20                  25                  30  
 Leu Ile Ala Leu Thr Met Lys Gly Cys Cys Ser Tyr Pro Pro Cys Phe  
           35                  40                  45  
 Ala Thr Asn Pro Asp Cys Gly Arg Arg Arg  
      50                          55

<210> 64  
 <211> 223  
 <212> DNA  
 <213> Conus textile

<220>  
 <221> CDS  
 <222> (1)..(192)

<400> 64  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
      1                  5                  10                  15  
 ttc tct tca ggt cgt agt aca ttt cgt ggc agg aat gcc gca gcc aaa 96  
 Phe Ser Ser Gly Arg Ser Thr Phe Arg Gly Arg Asn Ala Ala Ala Lys  
                   20                  25                  30  
 gcg tct ggc ctg gtc agt ctg act gac agg aga cca gaa tgc tgt agt 144  
 Ala Ser Gly Leu Val Ser Leu Thr Asp Arg Arg Pro Glu Cys Cys Ser  
           35                  40                  45  
 gat cct cgc tgt aac tcg agt cat cca gaa ctt tgt ggt gga aga cgc 192  
 Asp Pro Arg Cys Asn Ser Ser His Pro Glu Leu Cys Gly Gly Arg Arg  
      50                  55                  60  
 tgatgctcca ggaccctctg aaccacgacg t 223

<210> 65  
 <211> 64  
 <212> PRT  
 <213> Conus textile

<400> 65  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
      1                  5                  10                  15



Phe Ser Ser Gly Arg Ser Thr Phe Arg Gly Arg Asn Ala Ala Ala Lys  
                   20                  25                  30  
 Ala Ser Gly Leu Val Ser Leu Thr Asp Arg Arg Pro Glu Cys Cys Ser  
                   35                  40                  45  
 Asp Pro Arg Cys Asn Ser Ser His Pro Glu Leu Cys Gly Gly Arg Arg  
           50                  55                  60

<210> 66  
 <211> 244  
 <212> DNA  
 <213> Conus textile

<220>  
 <221> CDS  
 <222> (1)..(168)

<400> 66  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc gcc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Ala Val Val Ser  
   1                  5                  10                  15  
 ttc act tca gat cgt gca tct gat gac ggg aaa gcc gct gcg tct gac 96  
 Phe Thr Ser Asp Arg Ala Ser Asp Asp Gly Lys Ala Ala Ala Ser Asp  
                   20                  25                  30  
 ctg atc act ctg acc atc aag gga tgc tgt tct cgt cct ccc tgt atc 144  
 Leu Ile Thr Leu Thr Ile Lys Gly Cys Cys Ser Arg Pro Pro Cys Ile  
                   35                  40                  45  
 gcg aat aat cca gac ttg tgt ggt tgacgacgct gatgctccag aacggtctga 198  
 Ala Asn Asn Pro Asp Leu Cys Gly  
   50                  55  
 accacgacgt tcgagcaatg ttgaccgtgt ttctgttggt tgtctt 244

<210> 67  
 <211> 56  
 <212> PRT  
 <213> Conus textile

<400> 67  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Ala Val Val Ser  
   1                  5                  10                  15  
 Phe Thr Ser Asp Arg Ala Ser Asp Asp Gly Lys Ala Ala Ala Ser Asp  
                   20                  25                  30  
 Leu Ile Thr Leu Thr Ile Lys Gly Cys Cys Ser Arg Pro Pro Cys Ile  
                   35                  40                  45  
 Ala Asn Asn Pro Asp Leu Cys Gly  
   50                  55

<210> 68  
 <211> 223  
 <212> DNA  
 <213> Conus textile

<220>



<221> CDS  
 <222> (1)..(183)

<400> 68

atg	ttc	acc	gtg	ttt	ctg	ttg	gtt	gtc	ttg	gca	acc	acc	gtc	gtt	tcc	48
Met	Phe	Thr	Val	Phe	Leu	Leu	Val	Val	Leu	Ala	Thr	Thr	Val	Val	Ser	
1				5					10					15		
ttc	act	tca	ggc	cgt	agc	aca	ttt	cgt	ggc	agg	aat	gcc	gca	gcc	aaa	96
Phe	Thr	Ser	Gly	Arg	Ser	Thr	Phe	Arg	Gly	Arg	Asn	Ala	Ala	Ala	Lys	
			20					25					30			
gcg	tct	ggc	ctg	gtc	agt	ctg	act	gac	agg	aga	cca	caa	tgc	tgt	tct	144
Ala	Ser	Gly	Leu	Val	Ser	Leu	Thr	Asp	Arg	Arg	Pro	Gln	Cys	Cys	Ser	
		35					40					45				
cat	cct	gcc	tgt	aac	gta	gat	cat	cca	gaa	att	tgt	cgt	tga	agc	gct	193
His	Pro	Ala	Cys	Asn	Val	Asp	His	Pro	Glu	Ile	Cys	Arg				
		50				55					60					
gatgctccag gaccctctga accacgacgt															223	

<210> 69  
 <211> 61  
 <212> PRT  
 <213> Conus textile

<400> 69

Met	Phe	Thr	Val	Phe	Leu	Leu	Val	Val	Leu	Ala	Thr	Thr	Val	Val	Ser	
1				5					10					15		
Phe	Thr	Ser	Gly	Arg	Ser	Thr	Phe	Arg	Gly	Arg	Asn	Ala	Ala	Ala	Lys	
			20					25					30			
Ala	Ser	Gly	Leu	Val	Ser	Leu	Thr	Asp	Arg	Arg	Pro	Gln	Cys	Cys	Ser	
		35					40					45				
His	Pro	Ala	Cys	Asn	Val	Asp	His	Pro	Glu	Ile	Cys	Arg				
		50				55					60					

<210> 70  
 <211> 223  
 <212> DNA  
 <213> Conus radiatus

<220>  
 <221> CDS  
 <222> (1)..(183)

<400> 70

atg	ttc	acc	gtg	ttt	ctg	ttg	gtt	gtc	ttg	gca	acc	acc	gtc	gtt	tcc	48
Met	Phe	Thr	Val	Phe	Leu	Leu	Val	Val	Leu	Ala	Thr	Thr	Val	Val	Ser	
1				5					10					15		
ttc	act	tca	ggc	cgt	cgt	aca	ttt	cat	ggc	agg	aat	gcc	gca	gcc	aaa	96
Phe	Thr	Ser	Gly	Arg	Arg	Thr	Phe	His	Gly	Arg	Asn	Ala	Ala	Ala	Lys	
			20					25					30			
gcg	tct	ggc	ctg	gtc	agt	ctg	act	gac	agg	aga	cca	gaa	tgc	tgt	tct	144
Ala	Ser	Gly	Leu	Val	Ser	Leu	Thr	Asp	Arg	Arg	Pro	Glu	Cys	Cys	Ser	
		35					40					45				



cat cct gcc tgt aac gta gat cat cca gaa att tgt cgt tgaagacgct 193  
 His Pro Ala Cys Asn Val Asp His Pro Glu Ile Cys Arg  
           50                          55                          60

gatgctccag gaccctctga accacgacgt 223

<210> 71  
 <211> 61  
 <212> PRT  
 <213> Conus radiatus

<400> 71  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
       1                          5                          10                          15

Phe Thr Ser Gly Arg Arg Thr Phe His Gly Arg Asn Ala Ala Ala Lys  
                           20                          25                          30

Ala Ser Gly Leu Val Ser Leu Thr Asp Arg Arg Pro Glu Cys Cys Ser  
                           35                          40                          45

His Pro Ala Cys Asn Val Asp His Pro Glu Ile Cys Arg  
       50                          55                          60

<210> 72  
 <211> 223  
 <212> DNA  
 <213> Conus radiatus

<220>  
 <221> CDS  
 <222> (1)..(183)

<400> 72  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
       1                          5                          10                          15

ttc act tca ggt cgt agt aca ttt cgt ggc agg aat gcc gca gcc aaa 96  
 Phe Thr Ser Gly Arg Ser Thr Phe Arg Gly Arg Asn Ala Ala Ala Lys  
                           20                          25                          30

gcg tct ggc ctg gtc agt ctg act gac agg aga cca caa tgc tgt tct 144  
 Ala Ser Gly Leu Val Ser Leu Thr Asp Arg Arg Pro Gln Cys Cys Ser  
                           35                          40                          45

cat cct gcc tgt aac gta gat cat cca gaa att tgc gat tgaagacgct 193  
 His Pro Ala Cys Asn Val Asp His Pro Glu Ile Cys Asp  
       50                          55                          60

gatgctccag gaccctctga accacgacgt 223

<210> 73  
 <211> 61  
 <212> PRT  
 <213> Conus radiatus

<400> 73  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
       1                          5                          10                          15

1 CONT.



Phe Thr Ser Gly Arg Ser Thr Phe Arg Gly Arg Asn Ala Ala Ala Lys  
                   20                  25                  30  
 Ala Ser Gly Leu Val Ser Leu Thr Asp Arg Arg Pro Gln Cys Cys Ser  
                   35                  40                  45  
 His Pro Ala Cys Asn Val Asp His Pro Glu Ile Cys Asp  
                   50                  55                  60

<210> 74  
 <211> 218  
 <212> DNA  
 <213> *Conus striatus*

<220>  
 <221> CDS  
 <222> (1)..(171)

<400> 74  
 atg ttc act gtg ttt ctg ttg gtt gtc ttg gca atc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Ile Thr Val Val Ser  
      1                  5                  10                  15  
 ttc cct tta gat cgt gaa tct gat ggc gcg aat gcc gaa gcc cgc acc 96  
 Phe Pro Leu Asp Arg Glu Ser Asp Gly Ala Asn Ala Glu Ala Arg Thr  
                   20                  25                  30  
 cac gat cat gag aag cac gca ctg gac cgg aat gga tgc tgt agg aat 144  
 His Asp His Glu Lys His Ala Leu Asp Arg Asn Gly Cys Cys Arg Asn  
                   35                  40                  45  
 cct gcc tgt gag agc cac aga tgt ggt tgacgacgct gatgctccag 191  
 Pro Ala Cys Glu Ser His Arg Cys Gly  
                   50                  55  
 gaccctctga accacgacgt tcgagca 218

<210> 75  
 <211> 57  
 <212> PRT  
 <213> *Conus striatus*

<400> 75  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Ile Thr Val Val Ser  
      1                  5                  10                  15  
 Phe Pro Leu Asp Arg Glu Ser Asp Gly Ala Asn Ala Glu Ala Arg Thr  
                   20                  25                  30  
 His Asp His Glu Lys His Ala Leu Asp Arg Asn Gly Cys Cys Arg Asn  
                   35                  40                  45  
 Pro Ala Cys Glu Ser His Arg Cys Gly  
                   50                  55

<210> 76  
 <211> 227  
 <212> DNA  
 <213> *Conus bandanus*

<220>



&lt;221&gt; CDS

&lt;222&gt; (1)..(180)

&lt;400&gt; 76

atg	ttc	acc	atg	ttt	ctg	ttg	gtt	gtc	ttg	gca	acc	act	gtc	gtt	tcc	48
Met	Phe	Thr	Met	Phe	Leu	Leu	Val	Val	Leu	Ala	Thr	Thr	Val	Val	Ser	
1				5					10					15		
ttc	gct	tca	gat	cgt	gca	tct	gat	ggc	agg	aat	gcc	gca	gcc	aag	gac	96
Phe	Ala	Ser	Asp	Arg	Ala	Ser	Asp	Gly	Arg	Asn	Ala	Ala	Ala	Lys	Asp	
			20					25					30			
aaa	gcg	tct	gac	ctg	gtc	gct	ctg	acc	gtc	aag	gga	tgc	tgt	tct	cat	144
Lys	Ala	Ser	Asp	Leu	Val	Ala	Leu	Thr	Val	Lys	Gly	Cys	Cys	Ser	His	
		35					40					45				
cct	gcc	tgt	agc	gtg	aat	aat	cca	gac	att	tgt	ggc	tgaagacgct				190
Pro	Ala	Cys	Ser	Val	Asn	Asn	Pro	Asp	Ile	Cys	Gly					
	50					55					60					
gatgctccag gaccctctga accacgacgt tcgagca															227	

&lt;210&gt; 77

&lt;211&gt; 60

&lt;212&gt; PRT

&lt;213&gt; Conus bandanus

&lt;400&gt; 77

Met	Phe	Thr	Met	Phe	Leu	Leu	Val	Val	Leu	Ala	Thr	Thr	Val	Val	Ser	
1				5					10					15		
Phe	Ala	Ser	Asp	Arg	Ala	Ser	Asp	Gly	Arg	Asn	Ala	Ala	Ala	Lys	Asp	
			20					25					30			
Lys	Ala	Ser	Asp	Leu	Val	Ala	Leu	Thr	Val	Lys	Gly	Cys	Cys	Ser	His	
		35					40					45				
Pro	Ala	Cys	Ser	Val	Asn	Asn	Pro	Asp	Ile	Cys	Gly					
	50					55					60					

&lt;210&gt; 78

&lt;211&gt; 104

&lt;212&gt; DNA

&lt;213&gt; Conus bandanus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(54)

&lt;400&gt; 78

aaa	gaa	tgc	tgt	act	cat	cct	gcc	tgt	cac	gtg	agt	cat	cca	gaa	ctc	48
Lys	Glu	Cys	Cys	Thr	His	Pro	Ala	Cys	His	Val	Ser	His	Pro	Glu	Leu	
1				5					10					15		
tgt	ggc	tga	aaagcga	cgtgacgctc	caggaccctc	tgaaccacga	cgttcgagca									104
Cys	Gly															

&lt;210&gt; 79

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Conus bandanus



&lt;400&gt; 79

Lys Glu Cys Cys Thr His Pro Ala Cys His Val Ser His Pro Glu Leu  
 1 5 10 15

Cys Gly

&lt;210&gt; 80

&lt;211&gt; 206

&lt;212&gt; DNA

&lt;213&gt; Conus bandanus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(171)

&lt;400&gt; 80

atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca act gct gtt ctt cca 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Ala Val Leu Pro  
 1 5 10 15

gtc act tta gat cgt gca tct gat gga agg aat gca gca gcc aac gcc 96  
 Val Thr Leu Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Asn Ala  
 20 25 30

aaa acg cct cgc ctg atc gcg cca ttc atc agg gat tat tgc tgt cat 144  
 Lys Thr Pro Arg Leu Ile Ala Pro Phe Ile Arg Asp Tyr Cys Cys His  
 35 40 45

aga ggt ccc tgt atg gta tgg tgt ggt tgaagccgct gctgctccag 191  
 Arg Gly Pro Cys Met Val Trp Cys Gly  
 50 55

gaccctctga accac 206

&lt;210&gt; 81

&lt;211&gt; 57

&lt;212&gt; PRT

&lt;213&gt; Conus bandanus

&lt;400&gt; 81

Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Ala Val Leu Pro  
 1 5 10 15

Val Thr Leu Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Asn Ala  
 20 25 30

Lys Thr Pro Arg Leu Ile Ala Pro Phe Ile Arg Asp Tyr Cys Cys His  
 35 40 45

Arg Gly Pro Cys Met Val Trp Cys Gly  
 50 55

&lt;210&gt; 82

&lt;211&gt; 174

&lt;212&gt; DNA

&lt;213&gt; Conus characteristicus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(171)



<400> 82  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtg gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc act tca gat cgt gct tct gat ggc agg aat gcc gca gcc aac gcg 96  
 Phe Thr Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Asn Ala  
 20 25 30  
 ttt gac ctg atc gct ctg atc gcc agg caa aat tgc tgt agc att ccc 144  
 Phe Asp Leu Ile Ala Leu Ile Ala Arg Gln Asn Cys Cys Ser Ile Pro  
 35 40 45  
 agc tgt tgg gag aaa tat aaa tgt agt taa 174  
 Ser Cys Trp Glu Lys Tyr Lys Cys Ser  
 50 55

<210> 83  
 <211> 57  
 <212> PRT  
 <213> Conus characteristicus

<400> 83  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Thr Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Asn Ala  
 20 25 30  
 Phe Asp Leu Ile Ala Leu Ile Ala Arg Gln Asn Cys Cys Ser Ile Pro  
 35 40 45  
 Ser Cys Trp Glu Lys Tyr Lys Cys Ser  
 50 55

<210> 84  
 <211> 219  
 <212> DNA  
 <213> Conus characteristicus

<220>  
 <221> CDS  
 <222> (1)..(189)

<400> 84  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtg gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc act tca gat cgt gcg tct gaa ggc agg aat gct gca gcc aag gac 96  
 Phe Thr Ser Asp Arg Ala Ser Glu Gly Arg Asn Ala Ala Ala Lys Asp  
 20 25 30  
 aaa gcg tct gac ctg gtg gct ctg aca gtc agg gga tgc tgt gcc att 144  
 Lys Ala Ser Asp Leu Val Ala Leu Thr Val Arg Gly Cys Cys Ala Ile  
 35 40 45  
 cgt gaa tgt cgc ttg cag aat gca gcg tat tgt ggt gga ata tac 189  
 Arg Glu Cys Arg Leu Gln Asn Ala Ala Tyr Cys Gly Gly Ile Tyr  
 50 55 60  
 tgatgctcca ggaccctctg aaccacgacg 219



<210> 85  
 <211> 63  
 <212> PRT  
 <213> Conus characteristicus

<400> 85  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
   1                  5                  10                  15  
 Phe Thr Ser Asp Arg Ala Ser Glu Gly Arg Asn Ala Ala Ala Lys Asp  
                   20                  25                  30  
 Lys Ala Ser Asp Leu Val Ala Leu Thr Val Arg Gly Cys Cys Ala Ile  
                   35                  40                  45  
 Arg Glu Cys Arg Leu Gln Asn Ala Ala Tyr Cys Gly Gly Ile Tyr  
       50                  55                  60

<210> 86  
 <211> 217  
 <212> DNA  
 <213> Conus tulipa

<220>  
 <221> CDS  
 <222> (1)..(186)

<400> 86  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
   1                  5                  10                  15  
 ttc cct tca gat att gca act gag ggc agg aat gcc gca gcc aaa gcg 96  
 Phe Pro Ser Asp Ile Ala Thr Glu Gly Arg Asn Ala Ala Ala Lys Ala  
                   20                  25                  30  
 ttt gac ctg ata tct tct atc gtc aag aaa gga tgc tgt tcc cat cct 144  
 Phe Asp Leu Ile Ser Ser Ile Val Lys Lys Gly Cys Cys Ser His Pro  
                   35                  40                  45  
 gcc tgt tct ggg aat aat cca gaa ttt tgt cgt caa ggt cgc 186  
 Ala Cys Ser Gly Asn Asn Pro Glu Phe Cys Arg Gln Gly Arg  
       50                  55                  60  
 tgatgctcca ggaccctctg aaccacgacg t 217

<210> 87  
 <211> 62  
 <212> PRT  
 <213> Conus tulipa

<400> 87  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
   1                  5                  10                  15  
 Phe Pro Ser Asp Ile Ala Thr Glu Gly Arg Asn Ala Ala Ala Lys Ala  
                   20                  25                  30  
 Phe Asp Leu Ile Ser Ser Ile Val Lys Lys Gly Cys Cys Ser His Pro  
                   35                  40                  45



Ala Cys Ser Gly Asn Asn Pro Glu Phe Cys Arg Gln Gly Arg  
 50 55 60

<210> 88  
 <211> 217  
 <212> DNA  
 <213> Conus tulipa

<220>  
 <221> CDS  
 <222> (1)..(186)

<400> 88  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca aac act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc cct tca gat ata gca act gag ggc agg aat gcc gca gcc aaa gcg 96  
 Phe Pro Ser Asp Ile Ala Thr Glu Gly Arg Asn Ala Ala Ala Lys Ala  
 20 25 30  
 ttt gac ctg ata tct tcg atc gtc agg aaa gga tgc tgt tcc aat ccc 144  
 Phe Asp Leu Ile Ser Ser Ile Val Arg Lys Gly Cys Cys Ser Asn Pro  
 35 40 45  
 gcc tgt gcg ggg aat aat cca cat gtt tgt cgt caa ggt cgc 186  
 Ala Cys Ala Gly Asn Asn Pro His Val Cys Arg Gln Gly Arg  
 50 55 60  
 tgatgctcca ggaccctctg aaccacgacg t 217

<210> 89  
 <211> 62  
 <212> PRT  
 <213> Conus tulipa

<400> 89  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Pro Ser Asp Ile Ala Thr Glu Gly Arg Asn Ala Ala Ala Lys Ala  
 20 25 30  
 Phe Asp Leu Ile Ser Ser Ile Val Arg Lys Gly Cys Cys Ser Asn Pro  
 35 40 45  
 Ala Cys Ala Gly Asn Asn Pro His Val Cys Arg Gln Gly Arg  
 50 55 60

<210> 90  
 <211> 226  
 <212> DNA  
 <213> Conus sulcatus

<220>  
 <221> CDS  
 <222> (1)..(195)

<400> 90  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser



1	5	10	15	
ttc aat tca gat cgt gat cca gca tta ggt ggc agg aat gct gca gcc	96			
Phe Asn Ser Asp Arg Asp Pro Ala Leu Gly Gly Arg Asn Ala Ala Ala				
20 25 30				
aaa gcg tct gac aag atc gct tcg acc ctc aag aga aga gga tgc tgt	144			
Lys Ala Ser Asp Lys Ile Ala Ser Thr Leu Lys Arg Arg Gly Cys Cys				
35 40 45				
tcg tat ttt gac tgt aga atg atg ttt cca gaa atg tgt ggt tgg cga	192			
Ser Tyr Phe Asp Cys Arg Met Met Phe Pro Glu Met Cys Gly Trp Arg				
50 55 60				
ggc tgatgctcca ggaccctctg aaccacgacg t	226			
Gly				
65				
<210> 91				
<211> 65				
<212> PRT				
<213> Conus sulcatus				
<400> 91				
Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser				
1 5 10 15				
Phe Asn Ser Asp Arg Asp Pro Ala Leu Gly Gly Arg Asn Ala Ala Ala				
20 25 30				
Lys Ala Ser Asp Lys Ile Ala Ser Thr Leu Lys Arg Arg Gly Cys Cys				
35 40 45				
Ser Tyr Phe Asp Cys Arg Met Met Phe Pro Glu Met Cys Gly Trp Arg				
50 55 60				
Gly				
65				
<210> 92				
<211> 226				
<212> DNA				
<213> Conus sulcatus				
<220>				
<221> CDS				
<222> (1)..(195)				
<400> 92				
atg ttc acc gtc ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc	48			
Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser				
1 5 10 15				
ttc aat tca gat cgt gat cca gca tta ggt ggc agg aat gct gca gcc	96			
Phe Asn Ser Asp Arg Asp Pro Ala Leu Gly Gly Arg Asn Ala Ala Ala				
20 25 30				
ata gcg tct gac aag atc gct tcg acc ctc agg aga gga gga tgc tgt	144			
Ile Ala Ser Asp Lys Ile Ala Ser Thr Leu Arg Arg Gly Gly Cys Cys				
35 40 45				
tct ttt cct gcc tgt aga aag tat cgt cca gaa atg tgt ggt gga cga	192			



Ser Phe Pro Ala Cys Arg Lys Tyr Arg Pro Glu Met Cys Gly Gly Arg  
 50 55 60

cgc tgatgctcca ggaccctctg aaccacgacg t  
 Arg  
 65

226

<210> 93  
 <211> 65  
 <212> PRT  
 <213> Conus sulcatus

<400> 93  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15

Phe Asn Ser Asp Arg Asp Pro Ala Leu Gly Gly Arg Asn Ala Ala Ala  
 20 25 30

Ile Ala Ser Asp Lys Ile Ala Ser Thr Leu Arg Arg Gly Gly Cys Cys  
 35 40 45

Ser Phe Pro Ala Cys Arg Lys Tyr Arg Pro Glu Met Cys Gly Gly Arg  
 50 55 60

Arg  
 65

<210> 94  
 <211> 211  
 <212> DNA  
 <213> Conus sulcatus

<220>  
 <221> CDS  
 <222> (1)..(180)

<400> 94  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15

ttc act tca gat gat gaa tct gat cgc ggt gat gcc caa acc atc caa 96  
 Phe Thr Ser Asp His Glu Ser Asp Arg Gly Asp Ala Gln Thr Ile Gln  
 20 25 30

gaa gtg ttt gag atg ttc gct ctg gac agc gat gga tgc tgt tgg cat 144  
 Glu Val Phe Glu Met Phe Ala Leu Asp Ser Asp Gly Cys Cys Trp His  
 35 40 45

cct gct tgt ggc aga cac tat tgt ggt cga aga cgc tgatgctcca 190  
 Pro Ala Cys Gly Arg His Tyr Cys Gly Arg Arg Arg  
 50 55 60

ggaccctctg aaccacgacg t 211

<210> 95  
 <211> 60  
 <212> PRT  
 <213> Conus sulcatus



&lt;400&gt; 95

Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Thr Ser Asp His Glu Ser Asp Arg Gly Asp Ala Gln Thr Ile Gln  
 20 25 30  
 Glu Val Phe Glu Met Phe Ala Leu Asp Ser Asp Gly Cys Cys Trp His  
 35 40 45  
 Pro Ala Cys Gly Arg His Tyr Cys Gly Arg Arg Arg  
 50 55 60

&lt;210&gt; 96

&lt;211&gt; 202

&lt;212&gt; DNA

&lt;213&gt; Conus sulcatus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(195)

&lt;400&gt; 96

atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc aat tca gat cgt gat cca gca tta ggt ggc agg aat gct gca gcc 96  
 Phe Asn Ser Asp Arg Asp Pro Ala Leu Gly Gly Arg Asn Ala Ala Ala  
 20 25 30  
 ata gcg tct gac aag atc gct tcg acc ctc agg aga gga gga tgc tgt 144  
 Ile Ala Ser Asp Lys Ile Ala Ser Thr Leu Arg Arg Gly Gly Cys Cys  
 35 40 45  
 tct ttt gct gcc tgt aga aag tat cgt cca gaa atg tgt ggt gga cga 192  
 Ser Phe Ala Ala Cys Arg Lys Tyr Arg Pro Glu Met Cys Gly Gly Arg  
 50 55 60  
 cgc tgatgct 202  
 Arg  
 65

&lt;210&gt; 97

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Conus sulcatus

&lt;400&gt; 97

Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Asn Ser Asp Arg Asp Pro Ala Leu Gly Gly Arg Asn Ala Ala Ala  
 20 25 30  
 Ile Ala Ser Asp Lys Ile Ala Ser Thr Leu Arg Arg Gly Gly Cys Cys  
 35 40 45  
 Ser Phe Ala Ala Cys Arg Lys Tyr Arg Pro Glu Met Cys Gly Gly Arg  
 50 55 60  
 Arg



65

<210> 98  
 <211> 220  
 <212> DNA  
 <213> Conus sulcatus

<220>  
 <221> CDS  
 <222> (1)..(189)

<400> 98  
 atg ttc acc gtg ttt ctg ttg gtt ctc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Leu Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc aat tca gat cgt gca tta ggt ggc agg aat gct gca gcc aaa gcg 96  
 Phe Asn Ser Asp Arg Ala Leu Gly Gly Arg Asn Ala Ala Ala Lys Ala  
 20 25 30  
 tct gac aag atc ctt tcg aac ctc agg aga gga gga tgc tgt ttt cat 144  
 Ser Asp Lys Ile Leu Ser Asn Leu Arg Arg Gly Gly Cys Cys Phe His  
 35 40 45  
 cct gtc tgt tac atc aat ctt cta gaa atg tgt cgt caa cga ggc 189  
 Pro Val Cys Tyr Ile Asn Leu Leu Glu Met Cys Arg Gln Arg Gly  
 50 55 60  
 tgatcgcca ggaccctctg aaccacgacg t 220

<210> 99  
 <211> 63  
 <212> PRT  
 <213> Conus sulcatus

<400> 99  
 Met Phe Thr Val Phe Leu Leu Val Leu Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Asn Ser Asp Arg Ala Leu Gly Gly Arg Asn Ala Ala Ala Lys Ala  
 20 25 30  
 Ser Asp Lys Ile Leu Ser Asn Leu Arg Arg Gly Gly Cys Cys Phe His  
 35 40 45  
 Pro Val Cys Tyr Ile Asn Leu Leu Glu Met Cys Arg Gln Arg Gly  
 50 55 60

<210> 100  
 <211> 208  
 <212> DNA  
 <213> Conus consors

<220>  
 <221> CDS  
 <222> (1)..(177)

<400> 100  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg aca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Thr Thr Thr Val Val Ser  
 1 5 10 15



ttc cct tca gat agt gca tct gat gtc agg gat gac gaa gcc aaa gac 96  
 Phe Pro Ser Asp Ser Ala Ser Asp Val Arg Asp Asp Glu Ala Lys Asp  
                     20                    25                    30  
 gaa agg tct gac atg tac aaa tcg aaa cgg aat gga cgc tgt tgc cat 144  
 Glu Arg Ser Asp Met Tyr Lys Ser Lys Arg Asn Gly Arg Cys Cys His  
                     35                    40                    45  
 cct gcc tgt ggc aaa cac ttt agt tgt gga cgc tgatgctcca ggaccctctg 197  
 Pro Ala Cys Gly Lys His Phe Ser Cys Gly Arg  
                     50                    55  
 aaccacgacg t 208

<210> 101  
 <211> 59  
 <212> PRT  
 <213> Conus consors

<400> 101  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Thr Thr Thr Val Val Ser  
                     1                    5                    10                    15  
 Phe Pro Ser Asp Ser Ala Ser Asp Val Arg Asp Asp Glu Ala Lys Asp  
                     20                    25                    30  
 Glu Arg Ser Asp Met Tyr Lys Ser Lys Arg Asn Gly Arg Cys Cys His  
                     35                    40                    45  
 Pro Ala Cys Gly Lys His Phe Ser Cys Gly Arg  
                     50                    55

<210> 102  
 <211> 219  
 <212> DNA  
 <213> Conus stercusmuscarum

<220>  
 <221> CDS  
 <222> (1)..(189)

<400> 102  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
                     1                    5                    10                    15  
 tcc cct tca gat cgt gca tct gat ggc agg aat gcc gca gcc aac gag 96  
 Ser Pro Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Asn Glu  
                     20                    25                    30  
 aaa gcg tct gac gtg atc gcg ctg gcc ctc aag gga tgc tgt tcc aac 144  
 Lys Ala Ser Asp Val Ile Ala Leu Ala Leu Lys Gly Cys Cys Ser Asn  
                     35                    40                    45  
 cct gtc tgt cac ctg gag cat tca aac atg tgt ggt aga aga cgc 189  
 Pro Val Cys His Leu Glu His Ser Asn Met Cys Gly Arg Arg Arg  
                     50                    55                    60  
 tgatgctcca ggaccctctg aaccacgacg 219

<210> 103



<211> 63  
 <212> PRT  
 <213> Conus stercusmuscarum

<400> 103  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
   1                  5                  10                  15  
 Ser Pro Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Asn Glu  
           20                  25                  30  
 Lys Ala Ser Asp Val Ile Ala Leu Ala Leu Lys Gly Cys Cys Ser Asn  
           35                  40                  45  
 Pro Val Cys His Leu Glu His Ser Asn Met Cys Gly Arg Arg Arg  
       50                  55                  60

<210> 104  
 <211> 248  
 <212> DNA  
 <213> Conus betulinus

<220>  
 <221> CDS  
 <222> (1)..(180)

<400> 104  
 atg ttc tcc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
 Met Phe Ser Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
   1                  5                  10                  15  
 tcc act tca ggt ggt gca tct ggt ggc agg aag gct gca gcc aaa gcg 96  
 Ser Thr Ser Gly Gly Ala Ser Gly Gly Arg Lys Ala Ala Ala Lys Ala  
           20                  25                  30  
 tct aac cgg atc gct ctg acc gtc agg agt gca aca tgc tgt aat tat 144  
 Ser Asn Arg Ile Ala Leu Thr Val Arg Ser Ala Thr Cys Cys Asn Tyr  
           35                  40                  45  
 cct ccc tgt tac gag act tat cca gaa agt tgt ctg taacgtgaat 190  
 Pro Pro Cys Tyr Glu Thr Tyr Pro Glu Ser Cys Leu  
       50                  55                  60  
 catccagagc tttgtggctg aagacactga tgctccagga ccctctgaac cacgacgt 248

<210> 105  
 <211> 60  
 <212> PRT  
 <213> Conus betulinus

<400> 105  
 Met Phe Ser Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
   1                  5                  10                  15  
 Ser Thr Ser Gly Gly Ala Ser Gly Gly Arg Lys Ala Ala Ala Lys Ala  
           20                  25                  30  
 Ser Asn Arg Ile Ala Leu Thr Val Arg Ser Ala Thr Cys Cys Asn Tyr  
           35                  40                  45  
 Pro Pro Cys Tyr Glu Thr Tyr Pro Glu Ser Cys Leu  
       50                  55                  60



<210> 106  
 <211> 223  
 <212> DNA  
 <213> Conus betulinus

<220>  
 <221> CDS  
 <222> (1)..(183)

<400> 106  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtg gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc act tca ggt cgt gca ttt cgt ggc agg aat cgc gca gcc gac gac 96  
 Phe Thr Ser Gly Arg Ala Phe Arg Gly Arg Asn Arg Ala Ala Asp Asp  
 20 25 30  
 aaa agg tct gac ctg gcc gct ctg agc gtc agg gga gga tgc tgt tcc 144  
 Lys Arg Ser Asp Leu Ala Ala Leu Ser Val Arg Gly Gly Cys Cys Ser  
 35 40 45  
 cat cct gcc tgt gcg gtg aat cat cca gag ctt tgt ggc tgaagacgct 193  
 His Pro Ala Cys Ala Val Asn His Pro Glu Leu Cys Gly  
 50 55 60  
 gatgccccag gaccctctga accacgacgt 223

<210> 107  
 <211> 61  
 <212> PRT  
 <213> Conus betulinus

<400> 107  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Thr Ser Gly Arg Ala Phe Arg Gly Arg Asn Arg Ala Ala Asp Asp  
 20 25 30  
 Lys Arg Ser Asp Leu Ala Ala Leu Ser Val Arg Gly Gly Cys Cys Ser  
 35 40 45  
 His Pro Ala Cys Ala Val Asn His Pro Glu Leu Cys Gly  
 50 55 60

<210> 108  
 <211> 248  
 <212> DNA  
 <213> Conus betulinus

<220>  
 <221> CDS  
 <222> (1)..(180)

<400> 108  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc act tca ggt cgt gca tct ggt ggc agg aat gct gca gcc aaa gcg 96



Phe Thr Ser Gly Arg Ala Ser Gly Gly Arg Asn Ala Ala Ala Lys Ala  
                   20                  25                  30  
 tct aac cgg atc gct atg gcc atc agc agt gga gca tgc tgt gca tat 144  
 Ser Asn Arg Ile Ala Met Ala Ile Ser Ser Gly Ala Cys Cys Ala Tyr  
                   35                  40                  45  
 cct ccc tgt ttc gag gct tat cca gaa aga tgt ctg taacgtgaat 190  
 Pro Pro Cys Phe Glu Ala Tyr Pro Glu Arg Cys Leu  
                   50                  55                  60  
 catccagacc tttgtggctg aagacgctga tgccccagga ccctctgaac caccgacgt 248

<210> 109  
 <211> 60  
 <212> PRT  
 <213> Conus betulinus

<400> 109  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
   1                  5                  10                  15  
 Phe Thr Ser Gly Arg Ala Ser Gly Gly Arg Asn Ala Ala Ala Lys Ala  
                   20                  25                  30  
 Ser Asn Arg Ile Ala Met Ala Ile Ser Ser Gly Ala Cys Cys Ala Tyr  
                   35                  40                  45  
 Pro Pro Cys Phe Glu Ala Tyr Pro Glu Arg Cys Leu  
                   50                  55                  60

<210> 110  
 <211> 223  
 <212> DNA  
 <213> Conus betulinus

<220>  
 <221> CDS  
 <222> (1)..(192)

<400> 110  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
   1                  5                  10                  15  
 ttc act tca gat cgt gca ttt cgt ggc agg aat tcc gca gcc aac gac 96  
 Phe Thr Ser Asp Arg Ala Phe Arg Gly Arg Asn Ser Ala Ala Asn Asp  
                   20                  25                  30  
 aaa agg tct gac ctg gcc gct ctg agc gtc agg aga gga tgc tgc tcc 144  
 Lys Arg Ser Asp Leu Ala Ala Leu Ser Val Arg Arg Gly Cys Cys Ser  
                   35                  40                  45  
 cat ccc gcc tgt agc gtg aat cat cca gag ctt tgt ggt aga aga cgc 192  
 His Pro Ala Cys Ser Val Asn His Pro Glu Leu Cys Gly Arg Arg Arg  
                   50                  55                  60  
 tgatgccccca ggaccctctg aaccacgacg t 223

<210> 111  
 <211> 64



&lt;212&gt; PRT

&lt;213&gt; Conus betulinus

&lt;400&gt; 111

Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15

Phe Thr Ser Asp Arg Ala Phe Arg Gly Arg Asn Ser Ala Ala Asn Asp  
 20 25 30

Lys Arg Ser Asp Leu Ala Ala Leu Ser Val Arg Arg Gly Cys Cys Ser  
 35 40 45

His Pro Ala Cys Ser Val Asn His Pro Glu Leu Cys Gly Arg Arg Arg  
 50 55 60

&lt;210&gt; 112

&lt;211&gt; 248

&lt;212&gt; DNA

&lt;213&gt; Conus betulinus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(180)

&lt;400&gt; 112

atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15

ttc act tca ggt cgt gca tct ggt ggc agg aat gct gca gcc aaa gcg 96  
 Phe Thr Ser Gly Arg Ala Ser Gly Gly Arg Asn Ala Ala Ala Lys Ala  
 20 25 30

tct aac cgg atc gct ctg atc gtc agg aat gca gaa tgc tgt tat tat 144  
 Ser Asn Arg Ile Ala Leu Ile Val Arg Asn Ala Glu Cys Cys Tyr Tyr  
 35 40 45

cct ccc tgt tac gag gct tat cca gaa att tgt ctg taacgtgaat 190  
 Pro Pro Cys Tyr Glu Ala Tyr Pro Glu Ile Cys Leu  
 50 55 60

catccagacc tttgtggctg aagaccctga tgctccagga ccctctgaac cacgacgt 248

&lt;210&gt; 113

&lt;211&gt; 60

&lt;212&gt; PRT

&lt;213&gt; Conus betulinus

&lt;400&gt; 113

Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15

Phe Thr Ser Gly Arg Ala Ser Gly Gly Arg Asn Ala Ala Ala Lys Ala  
 20 25 30

Ser Asn Arg Ile Ala Leu Ile Val Arg Asn Ala Glu Cys Cys Tyr Tyr  
 35 40 45

Pro Pro Cys Tyr Glu Ala Tyr Pro Glu Ile Cys Leu  
 50 55 60



<210> 114  
 <211> 207  
 <212> DNA  
 <213> Conus pennaceus

<220>  
 <221> CDS  
 <222> (1)..(168)

<400> 114  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc att tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Ile Ser  
 1 5 10 15  
 ttc act tca gat cgt gca tct gat ggc ggg aat gcc gca gcg tct gac 96  
 Phe Thr Ser Asp Arg Ala Ser Asp Gly Gly Asn Ala Ala Ala Ser Asp  
 20 25 30  
 ctg atc gct ctg acc atc aag gga tgc tgt tct cat cct ccc tgt gcc 144  
 Leu Ile Ala Leu Thr Ile Lys Gly Cys Cys Ser His Pro Pro Cys Ala  
 35 40 45  
 atg aat aat cca gac tat tgt ggt tgacgacgct gatgctccag gaccctctga 198  
 Met Asn Asn Pro Asp Tyr Cys Gly  
 50 55  
 accacgacg 207

<210> 115  
 <211> 56  
 <212> PRT  
 <213> Conus pennaceus

<400> 115  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Ile Ser  
 1 5 10 15  
 Phe Thr Ser Asp Arg Ala Ser Asp Gly Gly Asn Ala Ala Ala Ser Asp  
 20 25 30  
 Leu Ile Ala Leu Thr Ile Lys Gly Cys Cys Ser His Pro Pro Cys Ala  
 35 40 45  
 Met Asn Asn Pro Asp Tyr Cys Gly  
 50 55

<210> 116  
 <211> 207  
 <212> DNA  
 <213> Conus pennaceus

<220>  
 <221> CDS  
 <222> (1)..(168)

<400> 116  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc act tca gat cgt gca tct gat ggc ggg aat gcc gca atg tct gac 96  
 Phe Thr Ser Asp Arg Ala Ser Asp Gly Gly Asn Ala Ala Met Ser Asp



20	25	30	
ctg atc gct ctg acc atc aag gga tgc tgt tct cat cct ccc tgt ttc			144
Leu Ile Ala Leu Thr Ile Lys Gly Cys Cys Ser His Pro Pro Cys Phe			
35	40	45	
ctg aat aat cca gac tat tgt ggt tgacgacgct gatgctccag gaccctctga			198
Leu Asn Asn Pro Asp Tyr Cys Gly			
50	55		
accacgacg			207
<210> 117			
<211> 56			
<212> PRT			
<213> Conus pennaceus			
<400> 117			
Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser			
1	5	10	15
Phe Thr Ser Asp Arg Ala Ser Asp Gly Gly Asn Ala Ala Met Ser Asp			
20	25	30	
Leu Ile Ala Leu Thr Ile Lys Gly Cys Cys Ser His Pro Pro Cys Phe			
35	40	45	
Leu Asn Asn Pro Asp Tyr Cys Gly			
50	55		
<210> 118			
<211> 210			
<212> DNA			
<213> Conus stercusmuscarum			
<220>			
<221> CDS			
<222> (1)..(171)			
<400> 118			
atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc			48
Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser			
1	5	10	15
ttc cct tca gat cgt gaa tct gat ggc gcg aat gac gaa gcc cgc acc			96
Phe Pro Ser Asp Arg Glu Ser Asp Gly Ala Asn Asp Glu Ala Arg Thr			
20	25	30	
gac gag cct gag gag cac gga ccg gac agg aat gga tgc tgt agg aat			144
Asp Glu Pro Glu Glu His Gly Pro Asp Arg Asn Gly Cys Cys Arg Asn			
35	40	45	
cct gcc tgt gag agc cac aga tgt ggt tgacgacgct gatgctccag			191
Pro Ala Cys Glu Ser His Arg Cys Gly			
50	55		
gaccctctga accacgacg			210
<210> 119			
<211> 57			
<212> PRT			



<213> Conus stercusmuscarum

<400> 119

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Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser
  1           5           10           15

Phe Pro Ser Asp Arg Glu Ser Asp Gly Ala Asn Asp Glu Ala Arg Thr
          20           25           30

Asp Glu Pro Glu Glu His Gly Pro Asp Arg Asn Gly Cys Cys Arg Asn
          35           40           45

Pro Ala Cys Glu Ser His Arg Cys Gly
          50           55

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<210> 120

<211> 210

<212> DNA

<213> Conus circumcissus

<220>

<221> CDS

<222> (1)..(180)

<400> 120

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atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc      48
Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser
  1           5           10           15

ttc cct tca gat cgt gca tct gat ggc agg aat gcc gca gcc agc gac      96
Phe Pro Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Ser Asp
          20           25           30

aga gcg tct gac gcg gcc cac cag gga tgc tgt tcc aac cct gtc tgt      144
Arg Ala Ser Asp Ala Ala His Gln Gly Cys Cys Ser Asn Pro Val Cys
          35           40           45

cac gtg gaa cat cca gaa ctt tgt cgt aga aga cgc tgatgctcca      190
His Val Glu His Pro Glu Leu Cys Arg Arg Arg Arg
          50           55           60

ggaccctctg aaccacgacg      210

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<210> 121

<211> 60

<212> PRT

<213> Conus circumcissus

<400> 121

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Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser
  1           5           10           15

Phe Pro Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Ser Asp
          20           25           30

Arg Ala Ser Asp Ala Ala His Gln Gly Cys Cys Ser Asn Pro Val Cys
          35           40           45

His Val Glu His Pro Glu Leu Cys Arg Arg Arg Arg
          50           55           60

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<210> 122  
 <211> 213  
 <212> DNA  
 <213> *Conus circumciscus*

<220>  
 <221> CDS  
 <222> (1)..(174)

<400> 122  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc cct tca aat cgt gaa tct gat ggc gcg aat gcc gaa gtc cgc acc 96  
 Phe Pro Ser Asn Arg Glu Ser Asp Gly Ala Asn Ala Glu Val Arg Thr  
 20 25 30  
 gac gag cct gag gag cac gac gaa ctg ggc ggg aat gga tgc tgt ggg 144  
 Asp Glu Pro Glu Glu His Asp Glu Leu Gly Gly Asn Gly Cys Cys Gly  
 35 40 45  
 aat cct gac tgt acg agc cac agt tgt gat tgacgacgct gatgctccag 194  
 Asn Pro Asp Cys Thr Ser His Ser Cys Asp  
 50 55  
 gaccctctga accacgacg 213

<210> 123  
 <211> 58  
 <212> PRT  
 <213> *Conus circumciscus*

<400> 123  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Pro Ser Asn Arg Glu Ser Asp Gly Ala Asn Ala Glu Val Arg Thr  
 20 25 30  
 Asp Glu Pro Glu Glu His Asp Glu Leu Gly Gly Asn Gly Cys Cys Gly  
 35 40 45  
 Asn Pro Asp Cys Thr Ser His Ser Cys Asp  
 50 55

<210> 124  
 <211> 207  
 <212> DNA  
 <213> *Conus episcopatus*

<220>  
 <221> CDS  
 <222> (1)..(168)

<400> 124  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc act tca gat cgt gca tct gat agc agg aag gac gca gcg tct ggc 96  
 Phe Thr Ser Asp Arg Ala Ser Asp Ser Arg Lys Asp Ala Ala Ser Gly



20	25	30	
ctg atc gct ctg acc atc aag gga tgc tgt tct gat cct cgc tgt aac			144
Leu Ile Ala Leu Thr Ile Lys Gly Cys Cys Ser Asp Pro Arg Cys Asn			
35	40	45	
atg aat aat cca gac tat tgt ggt tgacgacgct gatgctccag gaccctctga			198
Met Asn Asn Pro Asp Tyr Cys Gly			
50	55		
accacgacg			207
<210> 125			
<211> 56			
<212> PRT			
<213> Conus episcopatus			
<400> 125			
Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser			
1	5	10	15
Phe Thr Ser Asp Arg Ala Ser Asp Ser Arg Lys Asp Ala Ala Ser Gly			
20	25	30	
Leu Ile Ala Leu Thr Ile Lys Gly Cys Cys Ser Asp Pro Arg Cys Asn			
35	40	45	
Met Asn Asn Pro Asp Tyr Cys Gly			
50	55		
<210> 126			
<211> 213			
<212> DNA			
<213> Conus sponsalis			
<220>			
<221> CDS			
<222> (1)..(174)			
<400> 126			
atg tcc acc gtg ttt ctg ttg gtt gtc ctc gca acc acc gtc gtt tcc			48
Met Ser Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser			
1	5	10	15
ttc act gta gat cgt gca tct gat ggc agg gat gtc gca atc gac gac			96
Phe Thr Val Asp Arg Ala Ser Asp Gly Arg Asp Val Ala Ile Asp Asp			
20	25	30	
aga ttg gtg tct ctc cct cag atc gcc cat gct gac tgt tgt tcc gat			144
Arg Leu Val Ser Leu Pro Gln Ile Ala His Ala Asp Cys Cys Ser Asp			
35	40	45	
cct gcc tgc aag cag acg ccc ggt tgt cgt taaagacgct gctgctccag			194
Pro Ala Cys Lys Gln Thr Pro Gly Cys Arg			
50	55		
gaccctctga accacgacg			213
<210> 127			
<211> 58			
<212> PRT			



<213> Conus sponsalis

<400> 127

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Met Ser Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser
  1           5           10           15

Phe Thr Val Asp Arg Ala Ser Asp Gly Arg Asp Val Ala Ile Asp Asp
          20           25           30

Arg Leu Val Ser Leu Pro Gln Ile Ala His Ala Asp Cys Cys Ser Asp
          35           40           45

Pro Ala Cys Lys Gln Thr Pro Gly Cys Arg
  50           55
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<210> 128

<211> 221

<212> DNA

<213> Conus sponsalis

<220>

<221> CDS

<222> (1)..(168)

<400> 128

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atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gct tcc      48
Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Ala Ser
  1           5           10           15

ttc att atc gat gat cca tct gat ggc agg aat att gca gtc gac gac      96
Phe Ile Ile Asp Asp Pro Ser Asp Gly Arg Asn Ile Ala Val Asp Asp
          20           25           30

aga ggg ctt ttc tct acg ctc ttc cat gct gat tgc tgt gaa aat cct      144
Arg Gly Leu Phe Ser Thr Leu Phe His Ala Asp Cys Cys Glu Asn Pro
          35           40           45

gcc tgt aga cac acg cag ggt tgt tgatctttgt tcttcaaaga cactgctggc      198
Ala Cys Arg His Thr Gln Gly Cys
  50           55

ccaggaccct ctgaaccacg acg                                          221
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<210> 129

<211> 56

<212> PRT

<213> Conus sponsalis

<400> 129

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Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Ala Ser
  1           5           10           15

Phe Ile Ile Asp Asp Pro Ser Asp Gly Arg Asn Ile Ala Val Asp Asp
          20           25           30

Arg Gly Leu Phe Ser Thr Leu Phe His Ala Asp Cys Cys Glu Asn Pro
          35           40           45

Ala Cys Arg His Thr Gln Gly Cys
  50           55
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<210> 130  
 <211> 220  
 <212> DNA  
 <213> Conus dalli

<220>  
 <221> CDS  
 <222> (1)..(180)

<400> 130  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc act tca gat cgt gca ttt cgt ggc agg aat gcc gca gcc aaa gag 96  
 Phe Thr Ser Asp Arg Ala Phe Arg Gly Arg Asn Ala Ala Ala Lys Glu  
 20 25 30  
 tct ggc ctg gtc ggt ctg acc gac aag acg cga gga tgc tgt tct cat 144  
 Ser Gly Leu Val Gly Leu Thr Asp Lys Thr Arg Gly Cys Cys Ser His  
 35 40 45  
 cct gcc tgt aac gta gat cat cca gaa att tgt ggt tgaagacgct 190  
 Pro Ala Cys Asn Val Asp His Pro Glu Ile Cys Gly  
 50 55 60  
 gatgctccag gaccctctga accacgacgt 220

<210> 131  
 <211> 60  
 <212> PRT  
 <213> Conus dalli

<400> 131  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Thr Ser Asp Arg Ala Phe Arg Gly Arg Asn Ala Ala Ala Lys Glu  
 20 25 30  
 Ser Gly Leu Val Gly Leu Thr Asp Lys Thr Arg Gly Cys Cys Ser His  
 35 40 45  
 Pro Ala Cys Asn Val Asp His Pro Glu Ile Cys Gly  
 50 55 60

<210> 132  
 <211> 208  
 <212> DNA  
 <213> Conus dalli

<220>  
 <221> CDS  
 <222> (1)..(177)

<400> 132  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc act tca gat ggt gca tct gat gac agg aaa gcc gct gcg tct gac 96  
 Phe Thr Ser Asp Gly Ala Ser Asp Asp Arg Lys Ala Ala Ala Ser Asp



20 25 30  
 ctg atc act ctg acc atc aag gga tgc tgt tct cgt cct ccc tgt atc 144  
 Leu Ile Thr Leu Thr Ile Lys Gly Cys Cys Ser Arg Pro Pro Cys Ile  
 35 40 45  
 gcg aat aat cca gac ttg tgt ggt cga cga cgc tgatgctcca ggaccctctg 197  
 Ala Asn Asn Pro Asp Leu Cys Gly Arg Arg Arg  
 50 55  
 aaccacgacg t 208

<210> 133  
 <211> 59  
 <212> PRT  
 <213> Conus dalli

<400> 133  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Thr Ser Asp Gly Ala Ser Asp Asp Arg Lys Ala Ala Ala Ser Asp  
 20 25 30  
 Leu Ile Thr Leu Thr Ile Lys Gly Cys Cys Ser Arg Pro Pro Cys Ile  
 35 40 45  
 Ala Asn Asn Pro Asp Leu Cys Gly Arg Arg Arg  
 50 55

<210> 134  
 <211> 223  
 <212> DNA  
 <213> Conus dalli

<220>  
 <221> CDS  
 <222> (1)..(192)

<400> 134  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 tcc act tca ggt cgt cgt gca ttt cat ggc agg aat gcc gca gcc aaa 96  
 Ser Thr Ser Gly Arg Arg Ala Phe His Gly Arg Asn Ala Ala Ala Lys  
 20 25 30  
 gcg tct gga ctg gtc ggt ctg act gac agg aga cca caa tgc tgt agt 144  
 Ala Ser Gly Leu Val Gly Leu Thr Asp Arg Arg Pro Gln Cys Cys Ser  
 35 40 45  
 gat cct cgc tgt aac gta ggt cat cca gaa ctt tgt ggt gga aga cgc 192  
 Asp Pro Arg Cys Asn Val Gly His Pro Glu Leu Cys Gly Gly Arg Arg  
 50 55 60  
 tgatgctcca ggaccctctg aaccacaacg t 223

<210> 135  
 <211> 64  
 <212> PRT



<213> Conus dalli

<400> 135

Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
1 5 10 15

Ser Thr Ser Gly Arg Arg Ala Phe His Gly Arg Asn Ala Ala Ala Lys  
20 25 30

Ala Ser Gly Leu Val Gly Leu Thr Asp Arg Arg Pro Gln Cys Cys Ser  
35 40 45

Asp Pro Arg Cys Asn Val Gly His Pro Glu Leu Cys Gly Gly Arg Arg  
50 55 60

<210> 136

<211> 220

<212> DNA

<213> Conus dalli

<220>

<221> CDS

<222> (1)..(189)

<400> 136

atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
1 5 10 15

tcc act tca ggt cgt gca ttt cat ggc agg aat gcc gca gcc aaa gcg 96  
Ser Thr Ser Gly Arg Ala Phe His Gly Arg Asn Ala Ala Ala Lys Ala  
20 25 30

tct ggc ctg gtc ggt ctg acc gac aag agg caa gta tgc tgt agt gat 144  
Ser Gly Leu Val Gly Leu Thr Asp Lys Arg Gln Val Cys Cys Ser Asp  
35 40 45

cct cgc tgt aac gta ggt cat cca gaa att tgt ggt gga aga cgc 189  
Pro Arg Cys Asn Val Gly His Pro Glu Ile Cys Gly Gly Arg Arg  
50 55 60

tgatgctcca ggaccctctg aaccacgacg t 220

<210> 137

<211> 63

<212> PRT

<213> Conus dalli

<400> 137

Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
1 5 10 15

Ser Thr Ser Gly Arg Ala Phe His Gly Arg Asn Ala Ala Ala Lys Ala  
20 25 30

Ser Gly Leu Val Gly Leu Thr Asp Lys Arg Gln Val Cys Cys Ser Asp  
35 40 45

Pro Arg Cys Asn Val Gly His Pro Glu Ile Cys Gly Gly Arg Arg  
50 55 60



<210> 138  
 <211> 208  
 <212> DNA  
 <213> *Conus achatinus*

<220>  
 <221> CDS  
 <222> (1)..(180)

<400> 138  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg aca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Thr Thr Thr Val Val Ser  
 1 5 10 15  
 ttc cct tca gat agt gca tct ggt ggc agg gat gac gag gcc aaa gac 96  
 Phe Pro Ser Asp Ser Ala Ser Gly Gly Arg Asp Asp Glu Ala Lys Asp  
 20 25 30  
 gaa agg tct gac atg tac gaa ttg aaa cgg aat gga cgc tgt tgc cat 144  
 Glu Arg Ser Asp Met Tyr Glu Leu Lys Arg Asn Gly Arg Cys Cys His  
 35 40 45  
 cct gcc tgt ggt ggc aaa tac gtt aaa tgt gga cgc tgatgctcca 190  
 Pro Ala Cys Gly Gly Lys Tyr Val Lys Cys Gly Arg  
 50 55 60  
 ggaccctctc gaaccacg 208

<210> 139  
 <211> 60  
 <212> PRT  
 <213> *Conus achatinus*

<400> 139  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Thr Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Pro Ser Asp Ser Ala Ser Gly Gly Arg Asp Asp Glu Ala Lys Asp  
 20 25 30  
 Glu Arg Ser Asp Met Tyr Glu Leu Lys Arg Asn Gly Arg Cys Cys His  
 35 40 45  
 Pro Ala Cys Gly Gly Lys Tyr Val Lys Cys Gly Arg  
 50 55 60

<210> 140  
 <211> 211  
 <212> DNA  
 <213> *Conus bullatus*

<220>  
 <221> CDS  
 <222> (1)..(174)

<400> 140  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc tct aca gat gat gaa tct gat ggc tcg aat gaa gaa ccc agc gcc 96  
 Phe Ser Thr Asp Asp Glu Ser Asp Gly Ser Asn Glu Glu Pro Ser Ala



	20	25	30	
gac cag act gcc agg tcc tca atg aac agg gcg cct gga tgc tgt aac				144
Asp Gln Thr Ala Arg Ser Ser Met Asn Arg Ala Pro Gly Cys Cys Asn				
	35	40	45	
aat cct gcc tgt gtg aag cac aga tgt gga tgacgctgat gctccaggac				194
Asn Pro Ala Cys Val Lys His Arg Cys Gly				
	50	55		
cctctgaacc acgacgt				211
<210> 141				
<211> 58				
<212> PRT				
<213> Conus bullatus				
<400> 141				
Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser				
1	5	10	15	
Phe Ser Thr Asp Asp Glu Ser Asp Gly Ser Asn Glu Glu Pro Ser Ala				
	20	25	30	
Asp Gln Thr Ala Arg Ser Ser Met Asn Arg Ala Pro Gly Cys Cys Asn				
	35	40	45	
Asn Pro Ala Cys Val Lys His Arg Cys Gly				
	50	55		
<210> 142				
<211> 214				
<212> DNA				
<213> Conus bullatus				
<220>				
<221> CDS				
<222> (1)..(177)				
<400> 142				
atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc				48
Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser				
1	5	10	15	
ttc tct aca gat gat gaa tct gat ggc tcg aat gaa gaa ccc agc gcc				96
Phe Ser Thr Asp Asp Glu Ser Asp Gly Ser Asn Glu Glu Pro Ser Ala				
	20	25	30	
gac cag gct gcc agg tcc gca atg aac agg ccg cct gga tgc tgt aac				144
Asp Gln Ala Ala Arg Ser Ala Met Asn Arg Pro Pro Gly Cys Cys Asn				
	35	40	45	
aat cct gcc tgt gtg aag cac aga tgt ggt gga tgacgctgat gctccaggac				197
Asn Pro Ala Cys Val Lys His Arg Cys Gly Gly				
	50	55		
cctctgaacc acgacgt				214
<210> 143				
<211> 59				
<212> PRT				



<213> Conus bullatus

<400> 143

Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
1 5 10 15

Phe Ser Thr Asp Asp Glu Ser Asp Gly Ser Asn Glu Glu Pro Ser Ala  
20 25 30

Asp Gln Ala Ala Arg Ser Ala Met Asn Arg Pro Pro Gly Cys Cys Asn  
35 40 45

Asn Pro Ala Cys Val Lys His Arg Cys Gly Gly  
50 55

<210> 144

<211> 208

<212> DNA

<213> Conus bullatus

<220>

<221> CDS

<222> (1)..(177)

<400> 144

atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
1 5 10 15

ttc cct tca gat cgt gac tct gat ggc gcg gat gcc gaa gcc agt gac 96  
Phe Pro Ser Asp Arg Asp Ser Asp Gly Ala Asp Ala Glu Ala Ser Asp  
20 25 30

gag cct gtt gag ttc gaa agg gac gag aat gga tgc tgt tgg aat cct 144  
Glu Pro Val Glu Phe Glu Arg Asp Glu Asn Gly Cys Cys Trp Asn Pro  
35 40 45

tcc tgt ccg agg ccc aga tgt aca gga cga cgc taatgctcca ggaccctctg 197  
Ser Cys Pro Arg Pro Arg Cys Thr Gly Arg Arg  
50 55

aaccacgacg t 208

<210> 145

<211> 59

<212> PRT

<213> Conus bullatus

<400> 145

Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
1 5 10 15

Phe Pro Ser Asp Arg Asp Ser Asp Gly Ala Asp Ala Glu Ala Ser Asp  
20 25 30

Glu Pro Val Glu Phe Glu Arg Asp Glu Asn Gly Cys Cys Trp Asn Pro  
35 40 45

Ser Cys Pro Arg Pro Arg Cys Thr Gly Arg Arg  
50 55



<210> 146  
 <211> 211  
 <212> DNA  
 <213> *Conus bullatus*

<220>  
 <221> CDS  
 <222> (1)..(180)

<400> 146  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg aca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Thr Thr Thr Val Val Ser  
 1 5 10 15  
 ttc cct tca gat cgt gca tct gat ggc agg aat gcc gca gcc aac gac 96  
 Phe Pro Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp  
 20 25 30  
 aaa gcg tct gac gtg gtc acg ctg gtc ctc aag gga tgc tgt tcc acc 144  
 Lys Ala Ser Asp Val Val Thr Leu Val Leu Lys Gly Cys Cys Ser Thr  
 35 40 45  
 cct ccc tgt gct gtg ctg tat tgt ggt aga aga cgc tgatgctcca 190  
 Pro Pro Cys Ala Val Leu Tyr Cys Gly Arg Arg Arg  
 50 55 60  
 ggaccctctg aaccacgacg t 211

<210> 147  
 <211> 60  
 <212> PRT  
 <213> *Conus bullatus*

<400> 147  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Thr Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Pro Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp  
 20 25 30  
 Lys Ala Ser Asp Val Val Thr Leu Val Leu Lys Gly Cys Cys Ser Thr  
 35 40 45  
 Pro Pro Cys Ala Val Leu Tyr Cys Gly Arg Arg Arg  
 50 55 60

<210> 148  
 <211> 212  
 <212> DNA  
 <213> *Conus distans*

<220>  
 <221> CDS  
 <222> (1)..(171)

<400> 148  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttc gca tcc tct gtc acc tta 48  
 Met Phe Thr Val Phe Leu Leu Val Val Phe Ala Ser Ser Val Thr Leu  
 1 5 10 15  
 gat cgt gca tct tat ggc agg tat gcc tca ccc gtc gac aga gcg tct 96  
 Asp Arg Ala Ser Tyr Gly Arg Tyr Ala Ser Pro Val Asp Arg Ala Ser



	20	25	30	
gcc ctg atc gct cag gcc atc ctt cga gat tgc tgc tcc aat cct cct				144
Ala Leu Ile Ala Gln Ala Ile Leu Arg Asp Cys Cys Ser Asn Pro Pro				
	35	40	45	
tgt gcc cat aat aat cca gac tgt cgt taaagacgct gcttgctcca				191
Cys Ala His Asn Asn Pro Asp Cys Arg				
	50	55		
ggaccctctg aaccacgacg t				212

<210> 149  
 <211> 57  
 <212> PRT  
 <213> Conus distans

	20	25	30	
Met Phe Thr Val Phe Leu Leu Val Val Phe Ala Ser Ser Val Thr Leu				
	1	5	10	15
Asp Arg Ala Ser Tyr Gly Arg Tyr Ala Ser Pro Val Asp Arg Ala Ser				
	20	25	30	
Ala Leu Ile Ala Gln Ala Ile Leu Arg Asp Cys Cys Ser Asn Pro Pro				
	35	40	45	
Cys Ala His Asn Asn Pro Asp Cys Arg				
	50	55		

<210> 150  
 <211> 63  
 <212> DNA  
 <213> Conus textile

<220>  
 <221> CDS  
 <222> (1)..(60)

	20	25	30	
gga tgc tgt tct aat cct ccc tgt atc gcg aag aat cca cac atg tgt				48
Gly Cys Cys Ser Asn Pro Pro Cys Ile Ala Lys Asn Pro His Met Cys				
	1	5	10	15
ggt gga aga cgc tga				63
Gly Gly Arg Arg				
	20			

<210> 151  
 <211> 20  
 <212> PRT  
 <213> Conus textile

	20	25	30	
Gly Cys Cys Ser Asn Pro Pro Cys Ile Ala Lys Asn Pro His Met Cys				
	1	5	10	15
Gly Gly Arg Arg				
	20			



<210> 152  
 <211> 220  
 <212> DNA  
 <213> Conus consors

<220>  
 <221> CDS  
 <222> (1)..(189)

<400> 152  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc act gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 ttc cct tca gat cgt gca tct gat ggc agg aat gcc gca gcc aac gac 96  
 Phe Pro Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Asn Asp  
 20 25 30  
 aaa gcg tct gac gtg atc acg ctg gcc ctc aag gga tgc tgt tcc aac 144  
 Lys Ala Ser Asp Val Ile Thr Leu Ala Leu Lys Gly Cys Cys Ser Asn  
 35 40 45  
 cct gtc tgt cac ttg gag cat tca aac ctt tgt ggt aga aga cgc 189  
 Pro Val Cys His Leu Glu His Ser Asn Leu Cys Gly Arg Arg Arg  
 50 55 60  
 tgatgctcca ggaccctctg aaccacgacg t 220

<210> 153  
 <211> 63  
 <212> PRT  
 <213> Conus consors

<400> 153  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
 1 5 10 15  
 Phe Pro Ser Asp Arg Ala Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp  
 20 25 30  
 Lys Ala Ser Asp Val Ile Thr Leu Ala Leu Lys Gly Cys Cys Ser Asn  
 35 40 45  
 Pro Val Cys His Leu Glu His Ser Asn Leu Cys Gly Arg Arg Arg  
 50 55 60

<210> 154  
 <211> 15  
 <212> PRT  
 <213> Conus musicus

<220>  
 <221> SITE  
 <222> (4)..(12)  
 <223> Xaa at residues 4, 11 and 12 is Tyr, nor-Tyr,  
 mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr,  
 O-phospho-Tyr or nitro-Tyr. Xaa at residue 6 is  
 Pro or hydroxy-Pro.

<220>  
 <221> SITE  
 <222> (9)..(15)



<223> Xaa at residues 9, 10 and 15 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys; Xaa at residue 14 is Trp (D or L) or halo-Trp.

<400> 154

Gly Cys Cys Xaa Asn Xaa Val Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa  
 1 5 10 15

<210> 155

<211> 16

<212> PRT

<213> *Conus purpurascens*

<220>

<221> SITE

<222> (1)..(3)

<223> Xaa at residue 1 is Gln or pyro-Glu; Xaa at residue 2 is Glu or gamma-carboxy-Glu; Xaa at residues 3 and 9 is Pro or hydroxy-Pro.

<220>

<221> SITE

<222> (13)

<223> Xaa at residue 13 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 155

Xaa Xaa Xaa Gly Cys Cys Arg His Xaa Ala Cys Gly Xaa Asn Arg Cys  
 1 5 10 15

<210> 156

<211> 13

<212> PRT

<213> *Conus musicus*

<220>

<221> SITE

<222> (5)..(11)

<223> Xaa at residues 5 and 11 is Pro or hydroxy-Pro.

<400> 156

Cys Cys Ala Asp Xaa Asp Cys Arg Phe Arg Xaa Gly Cys  
 1 5 10

<210> 157

<211> 17

<212> PRT

<213> *Conus musicus*

<220>

<221> SITE

<222> (4)..(13)

<223> Xaa at residues 4 and 13 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 6 and 10 is Pro or hydroxy-Pro.

<220>

<221> SITE

<222> (9)..(17)

<223> Xaa at residues 9 and 16 is Trp (D or L) or



halo-Trp; Xaa at residues 11 and 17 is Lys,  
N-methyl-Lys, N,N-dimethyl-Lys or  
N,N,N-trimethyl-Lys.

<400> 157

Gly Cys Cys Xaa Asn Xaa Ser Cys Xaa Xaa Xaa Thr Xaa Cys Ser Xaa  
1 5 10 15

Xaa

<210> 158

<211> 13

<212> PRT

<213> Conus musicus

<220>

<221> SITE

<222> (5)..(8)

<223> Xaa at residue 5 is Pro or hydroxy-Pro; Xaa at  
residue 8 is Lys, N-methyl-Lys, N,N-dimethyl-Lys  
or N,N,N-trimethyl-Lys.

<220>

<221> SITE

<222> (9)..(11)

<223> Xaa at residue 9 is Glu or gamma-carboxy-Glu; Xaa  
at residue 11 is Tyr, nor-Tyr, mono-halo-Tyr,  
di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
nitro-Tyr.

<400> 158

Cys Cys Ser Asn Xaa Thr Cys Xaa Xaa Thr Xaa Gly Cys  
1 5 10

<210> 159

<211> 13

<212> PRT

<213> Conus musicus

<220>

<221> SITE

<222> (5)..(11)

<223> Xaa at residues 5 and 11 is Pro or hydroxy-Pro;  
Xaa at residue 8 is Lys, N-methyl-Lys,  
N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 159

Cys Cys Ala Asn Xaa Ile Cys Xaa Asn Thr Xaa Gly Cys  
1 5 10

<210> 160

<211> 13

<212> PRT

<213> Conus musicus

<220>

<221> SITE

<222> (5)..(8)

<223> Xaa at residue 5 is Pro or hydroxy-Pro; Xaa at  
residue 8 is Lys, N-methyl-Lys, N,N-dimethyl-Lys



or N,N,N-trimethyl-Lys.

<220>  
 <221> SITE  
 <222> (9)..(11)  
 <223> Xaa at residue 9 is Glu or gamma-carboxy-Glu; Xaa  
 at residue 11 is Tyr, mono-halo-Tyr, di-halo-Tyr,  
 O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr.

<400> 160  
 Cys Cys Asn Asn Xaa Thr Cys Xaa Xaa Thr Xaa Gly Cys  
     1                    5                    10

<210> 161  
 <211> 13  
 <212> PRT  
 <213> Conus musicus

<220>  
 <221> SITE  
 <222> (5)..(8)  
 <223> Xaa at residue 5 is Pro or hydroxy-Pro; Xaa at  
 residue 8 is Lys, N-methyl-Lys, N,N-dimethyl-Lys  
 or N,N,N-trimethyl-Lys.

<220>  
 <221> SITE  
 <222> (9)..(11)  
 <223> Xaa at residue 9 is Glu or gamma-carboxy-Glu; Xaa  
 at residue 11 is Tyr, nor-Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
 nitro-Tyr.

<400> 161  
 Cys Cys Ser Asn Xaa Val Cys Xaa Xaa Thr Xaa Gly Cys  
     1                    5                    10

<210> 162  
 <211> 17  
 <212> PRT  
 <213> Conus betulinus

<220>  
 <221> SITE  
 <222> (6)..(14)  
 <223> Xaa at residue 6 is Tyr, nor-Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
 nitro-Tyr; Xaa at residues 7, 8 and 14 is Pro or  
 hydroxy-Pro.

<220>  
 <221> SITE  
 <222> (15)  
 <223> Xaa at residue 15 is Lys, N-methyl-Lys,  
 N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 162  
 Gly Gly Cys Cys Ser Xaa Xaa Xaa Cys Ile Ala Ser Asn Xaa Xaa Cys  
     1                    5                    10                    15

Gly



<210> 163  
 <211> 15  
 <212> PRT  
 <213> Conus lividus

<220>  
 <221> SITE  
 <222> (6)..(13)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 163  
 Gly Cys Cys Ser His Xaa Val Cys Ser Ala Met Ser Xaa Ile Cys  
     1                    5                    10                    15

<210> 164  
 <211> 15  
 <212> PRT  
 <213> Conus musicus

<220>  
 <221> SITE  
 <222> (4)..(12)  
 <223> Xaa at residues 4 and 12 is Lys, N-methyl-Lys,  
       N,N-dimethyl-Lys or N,N,N-trimethyl-Lys; Xaa at  
       residue 6 is Pro or hydroxy-Pro.

<220>  
 <221> SITE  
 <222> (7)..(14)  
 <223> Xaa at residues 7 and 14 is Tyr, mono-halo-Tyr,  
       di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
       nitro-Tyr.

<400> 164  
 Gly Cys Cys Xaa Asn Xaa Xaa Cys Gly Ala Ser Xaa Thr Xaa Cys  
     1                    5                    10                    15

<210> 165  
 <211> 15  
 <212> PRT  
 <213> Conus omaria

<220>  
 <221> SITE  
 <222> (5)..(13)  
 <223> Xaa at residue 5 is Tyr, nor-Tyr, mono-halo-Tyr,  
       di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
       nitro-Tyr; Xaa at residues 6, 7 and 13 is Pro or  
       hydroxy-Pro.

<400> 165  
 Gly Cys Cys Ser Xaa Xaa Xaa Cys Phe Ala Thr Asn Xaa Asp Cys  
     1                    5                    10                    15

<210> 166  
 <211> 17  
 <212> PRT  
 <213> Conus radiatus

<220>



<221> SITE

<222> (6)..(14)

<223> Xaa at residue 6 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 7, 8 and 14 is Pro or hydroxy-Pro.

<400> 166

Gly	Gly	Cys	Cys	Ser	Xaa	Xaa	Xaa	Cys	Ile	Ala	Asn	Asn	Xaa	Leu	Cys
1				5					10					15	

Ala

<210> 167

<211> 17

<212> PRT

<213> Conus radiatus

<220>

<221> SITE

<222> (6)..(14)

<223> Xaa at residue 6 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 7, 8 and 14 is Pro or hydroxy-Pro.

<400> 167

Gly	Gly	Cys	Cys	Ser	Xaa	Xaa	Xaa	Cys	Ile	Ala	Asn	Asn	Xaa	Phe	Cys
1				5					10					15	

Ala

<210> 168

<211> 16

<212> PRT

<213> Conus virgo

<220>

<221> SITE

<222> (6)..(13)

<223> Xaa at residues 6, 7 and 13 is Pro or hydroxy-Pro.

<400> 168

Asp	Cys	Cys	Ser	Asn	Xaa	Xaa	Cys	Ser	Gln	Asn	Asn	Xaa	Asp	Cys	Met
1				5					10					15	

<210> 169

<211> 16

<212> PRT

<213> Conus virgo

<220>

<221> SITE

<222> (6)..(13)

<223> Xaa at residues 6, 7 and 13 is Pro or hydroxy-Pro.

<400> 169

Asp	Cys	Cys	Ser	Asn	Xaa	Xaa	Cys	Ala	His	Asn	Asn	Xaa	Asp	Cys	Arg
1				5					10					15	



<210> 170  
 <211> 20  
 <212> PRT  
 <213> *Conus achatinus*

<220>  
 <221> SITE  
 <222> (1)..(14)  
 <223> Xaa at residues 1, 11 and 14 is Glu or  
 gamma-carboxy-Glu; Xaa at residue 6 is Pro or  
 hydroxy-Pro.

<400> 170  
 Xaa Cys Cys Thr Asn Xaa Val Cys His Ala Xaa His Gln Xaa Leu Cys  
   1                  5                  10                  15  
 Ala Arg Arg Arg  
                   20

<210> 171  
 <211> 16  
 <212> PRT  
 <213> *Conus achatinus*

<220>  
 <221> SITE  
 <222> (6)..(10)  
 <223> Xaa at residue 6 is Pro or hydroxy-Pro; Xaa at  
 residue 11 is Glu or gamma-carboxy-Glu.

<400> 171  
 Gly Cys Cys Ser Asn Xaa Val Cys His Leu Xaa His Ser Asn Leu Cys  
   1                  5                  10                  15

<210> 172  
 <211> 20  
 <212> PRT  
 <213> *Conus achatinus*

<220>  
 <221> SITE  
 <222> (1)..(14)  
 <223> Xaa at residues 1, 11 and 14 is Glu or  
 gamma-carboxy-Glu; Xaa at residue 6 is Pro or  
 hydroxy-Pro.

<400> 172  
 Xaa Cys Cys Thr Asn Xaa Val Cys His Val Xaa His Gln Xaa Leu Cys  
   1                  5                  10                  15  
 Ala Arg Arg Arg  
                   20

<210> 173  
 <211> 17  
 <212> PRT  
 <213> *Conus ammiralis*

<220>  
 <221> SITE



<222> (1)..(15)

<223> Xaa at residue 1 is Gln or pyro-Glu; Xaa at residues 2 and 15 is Glu or gamma-carboxy-Glu; Xaa at residue 6 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or

<220>

<221> SITE

<222> (6)..(14)

<223> nitro-Tyr; Xaa at residues 7 and 14 is Pro or hydroxy-Pro.

<400> 173

Xaa	Xaa	Cys	Cys	Ser	Xaa	Xaa	Ala	Cys	Asn	Leu	Asp	His	Xaa	Xaa	Leu
1				5					10					15	

Cys

<210> 174

<211> 18

<212> PRT

<213> *Conus ammiralis*

<220>

<221> SITE

<222> (1)..(15)

<223> Xaa at residues 1, 7 and 14 is Pro or hydroxy-Pro; Xaa at residues 2 and 15 is Glu or gamma-carboxy-Glu.

<400> 174

Xaa	Xaa	Cys	Cys	Ser	Asp	Xaa	Arg	Cys	Asn	Ser	Thr	His	Xaa	Xaa	Leu
1				5					10					15	

Cys Gly

<210> 175

<211> 21

<212> PRT

<213> *Conus arenatus*

<220>

<221> SITE

<222> (7)..(12)

<223> Xaa at residues 7 and 8 is Pro or hydroxy-Pro; Xaa at residue 10 is Trp (D or L) or halo-Trp; Xaa at residues 11 and 12 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<220>

<221> SITE

<222> (13)..(19)

<223> Xaa at residue 13 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr ; Xaa at residue 19 is Glu or gamma-carboxy-Glu.

<400> 175

Leu	Asn	Cys	Cys	Met	Ile	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Gly	Asp	Arg
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



1 5 10 15

Cys Ser Xaa Val Arg  
20

<210> 176  
<211> 22  
<212> PRT  
<213> Conus arenatus

<220>  
<221> SITE  
<222> (9)..(20)  
<223> Xaa at residue 9 is Pro or hydroxy-Pro; Xaa at residues 12 and 20 is Glu or gamma-carboxy-Glu; Xaa at residue 14 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or

<220>  
<221> SITE  
<222> (9)..(20)  
<223> nitro-Tyr.

<400> 176  
Ala Phe Gly Cys Cys Asp Leu Ile Xaa Cys Leu Xaa Arg Xaa Gly Asn  
1 5 10 15

Arg Cys Asn Xaa Val His  
20

<210> 177  
<211> 21  
<212> PRT  
<213> Conus arenatus

<220>  
<221> SITE  
<222> (8)..(16)  
<223> Xaa at residue 8 is Pro or hydroxy-Pro; Xaa at residue 10 is Trp (D or L) or halo-Trp; Xaa at residues 12 and 16 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<220>  
<221> SITE  
<222> (11)..(19)  
<223> Xaa at residues 11 and 19 is Glu or gamma-carboxy-Glu; Xaa at residue 13 is Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr.

<400> 177  
Leu Gly Cys Cys Asn Val Thr Xaa Cys Xaa Xaa Xaa Gly Asp Xaa  
1 5 10 15

Cys Asn Xaa Val Arg  
20

<210> 178  
<211> 20  
<212> PRT

cont.  
A



<213> Conus arenatus

<220>

<221> SITE

<222> (2)..(14)

<223> Xaa at residue 2 is Glu or gamma-carboxy-Glu; Xaa at residues 7 and 14 is Pro or hydroxy-Pro.

<400> 178

Asp	Xaa	Cys	Cys	Ser	Asn	Xaa	Ala	Cys	Arg	Val	Asn	Asn	Xaa	His	Val
1				5					10					15	

Cys	Arg	Arg	Arg
			20

<210> 179

<211> 21

<212> PRT

<213> Conus arenatus

<220>

<221> SITE

<222> (7)..(13)

<223> Xaa at residue 7 is Pro or hydroxy-Pro; Xaa at residue 10 is Trp (D or L) or halo-Trp; Xaa at residue 12 is Glu or gamma-carboxy-Glu; Xaa at residue 13 is Tyr, nor-Tyr, mono-halo-Tyr,

<220>

<221> SITE

<222> (13)..(19)

<223> di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residues 14 and 19 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 179

Leu	Asn	Cys	Cys	Ser	Ile	Xaa	Gly	Cys	Xaa	Asn	Xaa	Xaa	Xaa	Asp	Arg
1				5					10					15	

Cys	Ser	Xaa	Val	Arg
				20

<210> 180

<211> 18

<212> PRT

<213> Conus aurisiacus

<220>

<221> SITE

<222> (7)..(14)

<223> Xaa at residues 7 and 14 is Pro or hydroxy-Pro; Xaa at residue 10 is Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr.

<400> 180

Gly	Gly	Cys	Cys	Ser	His	Xaa	Val	Cys	Xaa	Phe	Asn	Asn	Xaa	Gln	Met
1				5					10					15	

Cys	Arg
-----	-----



<210> 181  
 <211> 18  
 <212> PRT  
 <213> Conus aurisiacus

<220>  
 <221> SITE  
 <222> (7)..(14)  
 <223> Xaa at residues 7 and 14 is Pro or hydroxy-Pro.

<400> 181  
 Gly Gly Cys Cys Ser His Xaa Val Cys Asn Leu Asn Asn Xaa Gln Met  
           1                          5                          10                          15

Cys Arg

<210> 182  
 <211> 17  
 <212> PRT  
 <213> Conus bandanus

<220>  
 <221> SITE  
 <222> (6)..(15)  
 <223> Xaa at residues 6 and 7 is Pro or hydroxy-Pro; Xaa  
           at residues 9 and 15 is Tyr, mono-halo-Tyr,  
           di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
           nitro-Tyr.

<400> 182  
 Gly Cys Cys Ser His Xaa Xaa Cys Xaa Ala Asn Asn Gln Ala Xaa Cys  
           1                          5                          10                          15

Asn

<210> 183  
 <211> 17  
 <212> PRT  
 <213> Conus betulinus

<220>  
 <221> SITE  
 <222> (7)..(15)  
 <223> Xaa at residues 7 and 14 is Pro and hydroxy-Pro;  
           Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 183  
 Gly Gly Cys Cys Ser His Xaa Ala Cys Ser Val Thr His Xaa Xaa Leu  
           1                          5                          10                          15

Cys

<210> 184  
 <211> 18  
 <212> PRT  
 <213> Conus betulinus



<220>  
 <221> SITE  
 <222> (6)..(12)  
 <223> Xaa at residue 6 is Tyr, nor-Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
 nitro-Tyr; Xaa at residue 7 is Pro and  
 hydroxy-Pro; Xaa at residue 12 is Glu or  
  
 <220>  
 <221> SITE  
 <222> (6)..(12)  
 <223> gamma-carboxy-Glu.  
  
 <400> 184  
 Gly Gly Cys Cys Ser Xaa Xaa Ala Cys Ser Val Xaa His Gln Asp Leu  
   1                  5                  10                  15  
  
 Cys Asp

<210> 185  
 <211> 25  
 <212> PRT  
 <213> Conus characteristicus

<220>  
 <221> SITE  
 <222> (8)..(22)  
 <223> Xaa at residues 8 and 22 is Pro or hydroxy-Pro;  
 Xaa at residue 10 is Trp (D or L) or halo-Trp; Xaa  
 at residue 13 is Tyr, nor-Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or

<220>  
 <221> SITE  
 <222> (8)..(22)  
 <223> nitro-Tyr; Xaa at residues 15, 16 and 19 is Glu  
 or gamma-carboxy-Glu.

<400> 185  
 Val Ser Cys Cys Val Val Arg Xaa Cys Xaa Ile Arg Xaa Gln Xaa Xaa  
   1                  5                  10                  15  
  
 Cys Leu Xaa Ala Asp Xaa Arg Thr Leu  
           20                  25

<210> 186  
 <211> 21  
 <212> PRT  
 <213> Conus characteristicus

<220>  
 <221> SITE  
 <222> (1)..(19)  
 <223> Xaa at residue 1 is Gln or pyro-Glu; Xaa at  
 residue 7 is Pro or hydroxy-Pro; Xaa at residue 10  
 is Trp (D or L) or halo-Trp; Xaa at residues 11  
 and 19 is Glu or gamma-carboxy-Glu.

<220>  
 <221> SITE



<222> (12)..(16)

<223> Xaa at residues 12 and 16 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys; Xaa at residue 13 is Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr.

<400> 186

Xaa Asn Cys Cys Ser Ile Xaa Gly Cys Xaa Xaa Xaa Xaa Gly Asp Xaa  
1 5 10 15

Cys Ser Xaa Val Arg  
20

<210> 187

<211> 16

<212> PRT

<213> Conus catus

<220>

<221> SITE

<222> (6)..(13)

<223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro;  
Xaa at residue 11 is Glu or gamma-carboxy-Glu.

<400> 187

Gly Cys Cys Ser Asn Xaa Val Cys His Leu Xaa His Xaa Asn Ala Cys  
1 5 10 15

<210> 188

<211> 17

<212> PRT

<213> Conus catus

<220>

<221> SITE

<222> (6)..(13)

<223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro;  
Xaa at residue 9 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr.

<400> 188

Gly Cys Cys Ser Asn Xaa Ile Cys Xaa Phe Asn Asn Xaa Arg Ile Cys  
1 5 10 15

Arg

<210> 189

<211> 17

<212> PRT

<213> Conus episcopatus

<220>

<221> SITE

<222> (1)..(14)

<223> Xaa at residues 1 and 14 is Glu or gamma-carboxy-Glu; Xaa at residues 6, 7 and 13 is Pro or hydroxy-Pro; Xaa at residue 10 is Trp (D or L) or halo-Trp.



<220>  
 <221> SITE  
 <222> (11)  
 <223> Xaa at residue 11 is Lys, N-methyl-Lys,  
 N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 189  
 Xaa Cys Cys Ser Gln Xaa Xaa Cys Arg Xaa Xaa His Xaa Xaa Leu Cys  
     1                    5                    10                    15  
 Ser

<210> 190  
 <211> 16  
 <212> PRT  
 <213> Conus geographus

<220>  
 <221> SITE  
 <222> (6)  
 <223> Xaa at residue 6 is Pro or hydroxy-Pro.

<400> 190  
 Gly Cys Cys Ser His Xaa Ala Cys Ala Gly Asn Asn Gln His Ile Cys  
     1                    5                    10                    15

<210> 191  
 <211> 18  
 <212> PRT  
 <213> Conus geographus

<220>  
 <221> SITE  
 <222> (6)..(13)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 191  
 Gly Cys Cys Ala Val Xaa Ser Cys Arg Leu Arg Asn Xaa Asp Leu Cys  
     1                    5                    10                    15

Gly Gly

<210> 192  
 <211> 16  
 <212> PRT  
 <213> Conus imperialis

<220>  
 <221> NP\_BIND  
 <222> (6)..(13)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 192  
 Gly Cys Cys Ser His Xaa Ala Cys Asn Val Asn Asn Xaa His Ile Cys  
     1                    5                    10                    15

<210> 193  
 <211> 20



<212> PRT  
 <213> Conus lividus

<220>  
 <221> SITE  
 <222> (2)..(10)  
 <223> Xaa at residues 2, 7, 9 and 10 is Pro or  
 hydroxy-Pro; Xaa at residues 3 and 4 is Glu or  
 gamma-carboxy-Glu.

<400> 193  
 Thr Xaa Xaa Xaa Cys Cys Xaa Asn Xaa Xaa Cys Phe Ala Thr Asn Ser  
     1                    5                    10                    15

Asp Ile Cys Gly  
                     20

<210> 194  
 <211> 17  
 <212> PRT  
 <213> Conus lividus

<220>  
 <221> SITE  
 <222> (7)..(12)  
 <223> Xaa at residue 7 is Pro or hydroxy-Pro; Xaa at  
 residue 12 is Lys, N-methyl-Lys, N,N-dimethyl-Lys  
 or N,N,N-trimethyl-Lys.

<400> 194  
 Asp Ala Cys Cys Ser Asp Xaa Arg Cys Ser Gly Xaa His Gln Asp Leu  
     1                    5                    10                    15

Cys

<210> 195  
 <211> 17  
 <212> PRT  
 <213> Conus lividus

<220>  
 <221> SITE  
 <222> (1)..(7)  
 <223> Xaa at residue 1 is Glu or gamma-carboxy-Glu; Xaa  
 at residue 7 is Pro or hydroxy-Pro.

<400> 195  
 Xaa Asp Cys Cys Ser Asp Xaa Arg Cys Ser Val Gly His Gln Asp Leu  
     1                    5                    10                    15

Cys

<210> 196  
 <211> 16  
 <212> PRT  
 <213> Conus lividus

<220>  
 <221> SITE



<222> (6)

<223> Xaa at residue 6 is Pro or hydroxy-Pro.

<400> 196

Gly	Cys	Cys	Ser	His	Xaa	Ala	Cys	Ala	Gly	Ser	Asn	Ala	His	Ile	Cys
1				5					10					15	

<210> 197

<211> 17

<212> PRT

<213> Conus lividus

<220>

<221> SITE

<222> (1)..(7)

<223> Xaa at residue 1 is Glu or gamma-carboxy-Glu; Xaa  
at residue 7 is Pro or hydroxy-Pro.

<400> 197

Xaa	Asp	Cys	Cys	Ser	Asp	Xaa	Arg	Cys	Ser	Val	Gly	His	Gln	Asp	Met
1				5				10						15	

Cys

<210> 198

<211> 16

<212> PRT

<213> Conus lividus

<220>

<221> SITE

<222> (6)..(13)

<223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 198

Gly	Cys	Cys	Ser	His	Xaa	Ala	Cys	Ala	Gly	Asn	Asn	Xaa	His	Ile	Cys
1				5					10					15	

<210> 199

<211> 17

<212> PRT

<213> Conus lividus

<220>

<221> SITE

<222> (6)..(14)

<223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro;  
Xaa at residue 14 is Tyr, mono-halo-Tyr,  
di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
nitro-Tyr.

<400> 199

Gly	Cys	Cys	Gly	Asn	Xaa	Ser	Cys	Ser	Ile	His	Ile	Xaa	Xaa	Val	Cys
1				5					10					15	

Asn

<210> 200



<211> 21  
 <212> PRT  
 <213> Conus lividus

<220>  
 <221> SITE  
 <222> (4)..(5)  
 <223> Xaa at residues 4 and 5 is Glu or  
 gamma-carboxy-Glu.

<400> 200  
 Thr Asp Ser Xaa Xaa Cys Cys Leu Asp Ser Arg Cys Ala Gly Gln His  
           1                  5                  10                  15  
 Gln Asp Leu Cys Gly  
                   20

<210> 201  
 <211> 17  
 <212> PRT  
 <213> Conus marmoreus

<220>  
 <221> SITE  
 <222> (6)..(15)  
 <223> Xaa at residues 6 and 7 is Pro or hydroxy-Pro; Xaa  
 at residues 9 and 15 is Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
 nitro-Tyr.

<400> 201  
 Gly Cys Cys Ser Asn Xaa Xaa Cys Xaa Ala Asn Asn Gln Ala Xaa Cys  
           1                  5                  10                  15

Asn

<210> 202  
 <211> 16  
 <212> PRT  
 <213> Conus marmoreus

<220>  
 <221> SITE  
 <222> (6)..(13)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 202  
 Gly Cys Cys Ser His Xaa Ala Cys Ser Val Asn Asn Xaa Asp Ile Cys  
           1                  5                  10                  15

<210> 203  
 <211> 18  
 <212> PRT  
 <213> Conus musicus

<220>  
 <221> SITE  
 <222> (2)..(15)  
 <223> Xaa at residues 2 and 12 is Lys, N-methyl-Lys,  
 N,N-dimethyl-Lys or N,N,N-trimethyl-Lys; Xaa at



residue 14 is Pro or hydroxy-Pro.

<220>

<221> SITE

<222> (16)

<223> Xaa at residue 16 is Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr.

<400> 203

Gly	Xaa	Cys	Cys	Ile	Asn	Asp	Ala	Cys	Arg	Ser	Xaa	His	Xaa	Gln	Xaa
1				5					10					15	

Cys Ser

<210> 204

<211> 17

<212> PRT

<213> Conus musicus

<220>

<221> SITE

<222> (4)..(15)

<223> Xaa at residues 4 and 15 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residue 13 is Pro or hydroxy-Pro.

<400> 204

Gly	Cys	Cys	Xaa	Asn	Ile	Ala	Cys	Arg	Ile	Asn	Asn	Xaa	Arg	Xaa	Cys
1				5					10					15	

Arg

<210> 205

<211> 17

<212> PRT

<213> Conus obscurus

<220>

<221> SITE

<222> (6)..(15)

<223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro; Xaa at residues 12 and 15 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr.

<220>

<221> SITE

<222> (14)

<223> Xaa at residue 14 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 205

Gly	Cys	Cys	Ser	His	Xaa	Val	Cys	Arg	Phe	Asn	Xaa	Xaa	Xaa	Xaa	Cys
1				5					10					15	

Gly



<210> 206  
 <211> 18  
 <212> PRT  
 <213> Conus obscurus

<220>  
 <221> SITE  
 <222> (2)..(15)  
 <223> Xaa at residue 2 is Glu or gamma-carboxy-Glu; Xaa  
 at residues 7, 8 and 14 is Pro or hydroxy-Pro; Xaa  
 at residue 15 is Tyr, nor-Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or

<220>  
 <221> SITE  
 <222> (2)..(15)  
 <223> nitro-Tyr

<400> 206  
 Asp Xaa Cys Cys Ala Ser Xaa Xaa Cys Arg Leu Asn Asn Xaa Xaa Val  
     1                    5                    10                    15

Cys His

<210> 207  
 <211> 19  
 <212> PRT  
 <213> Conus obscurus

<220>  
 <221> SITE  
 <222> (6)..(18)  
 <223> Xaa at residue 6 is Pro or hydroxy-Pro; Xaa at  
 residue 9 is Trp (D or L) or halo-Trp; Xaa at  
 residues 14 and 18 is Glu or gamma-carboxy-Glu.

<220>  
 <221> SITE  
 <222> (15)  
 <223> Xaa at residue 15 is Tyr, nor-Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
 nitro-Tyr.

<400> 207  
 Gly Cys Cys Ser Asn Xaa Val Cys Xaa Gln Asn Asn Ala Xaa Xaa Cys  
     1                    5                    10                    15

Arg Xaa Ser

<210> 208  
 <211> 16  
 <212> PRT  
 <213> Conus obscurus

<220>  
 <221> SITE  
 <222> (6)..(15)  
 <223> Xaa at residues 6 and 7 is Pro or hydroxy-Pro; Xaa  
 at residue 15 is Tyr, nor-Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or



nitro-Tyr.

<400> 208

Gly Cys Cys Ser His Xaa Xaa Cys Ala Gln Asn Asn Gln Asp Xaa Cys  
1 5 10 15

<210> 209

<211> 19

<212> PRT

<213> Conus obscurus

<220>

<221> SITE

<222> (6)..(15)

<223> Xaa at residue 6 is Pro or hydroxy-Pro; Xaa at residues 14 and 18 is Glu or gamma-carboxy-Glu; Xaa at residue 15 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or

<220>

<221> SITE

<222> (6)..(15)

<223> nitro-Tyr.

<400> 209

Gly Cys Cys Ser His Xaa Ala Cys Ser Gly Asn Asn Arg Xaa Xaa Cys  
1 5 10 15

Arg Xaa Ser

<210> 210

<211> 18

<212> PRT

<213> Conus omaria

<220>

<221> SITE

<222> (2)..(15)

<223> Xaa at residues 2, 7 and 14 is Pro or hydroxy-Pro; Xaa at residue 6 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residue 15 is Glu or

<220>

<221> SITE

<222> (2)..(15)

<223> gamma-carboxy-Glu

<400> 210

Asp Xaa Cys Cys Ser Xaa Xaa Asp Cys Gly Ala Asn His Xaa Xaa Ile  
1 5 10 15

Cys Gly

<210> 211

<211> 17

<212> PRT

<213> Conus omaria



<220>  
 <221> SITE  
 <222> (1)..(14)  
 <223> Xaa at residues 1 and 14 is Glu or  
 gamma-carboxy-Glu; Xaa at residues 6, 7 and 13 is  
 Pro or hydroxy-Pro; Xaa at residue 10 is Trp (D or  
 L) or halo-Trp.

<220>  
 <221> SITE  
 <222> (11)  
 <223> Xaa at residue 11 is Lys, N-methyl-Lys,  
 N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 211  
 Xaa Cys Cys Ser Gln Xaa Xaa Cys Arg Xaa Xaa His Xaa Xaa Leu Cys  
       1                  5                  10                  15

Ser

<210> 212  
 <211> 16  
 <212> PRT  
 <213> Conus omaria

<220>  
 <221> SITE  
 <222> (6)..(13)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 212  
 Gly Cys Cys Ser His Xaa Ala Cys Ala Gly Asn Asn Xaa His Ile Cys  
       1                  5                  10                  15

<210> 213  
 <211> 16  
 <212> PRT  
 <213> Conus omaria

<220>  
 <221> SITE  
 <222> (6)..(15)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro;  
 Xaa at residue 15 is Tyr, nor-Tyr, mono-halo-Tyr,  
 di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
 nitro-Tyr.

<400> 213  
 Gly Cys Cys Ser Asp Xaa Ser Cys Asn Val Asn Asn Xaa Asp Xaa Cys  
       1                  5                  10                  15

<210> 214  
 <211> 18  
 <212> PRT  
 <213> Conus omaria

<220>  
 <221> SITE  
 <222> (1)..(7)  
 <223> Xaa at residues 1 and 2 is Glu or



gamma-carboxy-Glu; Xaa at residue 7 is Pro or hydroxy-Pro.

<400> 214

Xaa Xaa Cys Cys Ser Asp Xaa Arg Cys Ser Val Gly His Gln Asp Met  
1 5 10 15

Cys Arg

<210> 215

<211> 17

<212> PRT

<213> Conus purpurascens

<220>

<221> SITE

<222> (7)..(15)

<223> Xaa at residue 7 is Pro or hydroxy-Pro; Xaa at residue 15 is Glu or gamma-carboxy-Glu.

<400> 215

Gly Gly Cys Cys Ser Asn Xaa Ala Cys Leu Val Asn His Leu Xaa Met  
1 5 10 15

Cys

<210> 216

<211> 18

<212> PRT

<213> Conus purpurascens

<220>

<221> SITE

<222> (3)..(15)

<223> Xaa at residues 3, 8 and 15 is Pro or hydroxy-Pro.

<400> 216

Arg Asp Xaa Cys Cys Phe Asn Xaa Ala Cys Asn Val Asn Asn Xaa Gln  
1 5 10 15

Ile Cys

<210> 217

<211> 21

<212> PRT

<213> Conus purpurascens

<220>

<221> SITE

<222> (5)..(8)

<223> Xaa at residue 5 is Pro or hydroxy-Pro; Xaa at residue 8 is Trp (D or L) or halo-Trp.

<400> 217

Cys Cys Ser Asp Xaa Ser Cys Xaa Arg Leu His Ser Leu Ala Cys Thr  
1 5 10 15

Gly Ile Val Asn Arg



20

<210> 218  
 <211> 16  
 <212> PRT  
 <213> *Conus purpurascens*

<220>  
 <221> SITE  
 <222> (5)  
 <223> Xaa at residue 5 is Pro or hydroxy-Pro.

<400> 218  
 Cys Cys Thr Asn Xaa Ala Cys Leu Val Asn Asn Ile Arg Phe Cys Gly  
   1                  5                  10                  15

<210> 219  
 <211> 18  
 <212> PRT  
 <213> *Conus regius*

<220>  
 <221> SITE  
 <222> (2)..(7)  
 <223> Xaa at residue 2 is Glu or gamma-carboxy-Glu; Xaa  
       at residue 7 is Pro or hydroxy-Pro.

<400> 219  
 Asp Xaa Cys Cys Ser Asp Xaa Arg Cys His Gly Asn Asn Arg Asp His  
   1                  5                  10                  15

Cys Ala

<210> 220  
 <211> 17  
 <212> PRT  
 <213> *Conus regius*

<220>  
 <221> SITE  
 <222> (6)..(13)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 220  
 Asp Cys Cys Ser His Xaa Leu Cys Arg Leu Phe Val Xaa Gly Leu Cys  
   1                  5                  10                  15

Ile

<210> 221  
 <211> 17  
 <212> PRT  
 <213> *Conus regius*

<220>  
 <221> SITE  
 <222> (6)..(13)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro;



Xaa at residue 9 is Lys, N-methyl-Lys,  
N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<220>

<221> SITE

<222> (12)

<223> Xaa at residue 12 is Tyr, nor-Tyr, mono-halo-Tyr,  
di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or  
nitro-Tyr.

<400> 221

Gly	Cys	Cys	Ser	His	Xaa	Val	Cys	Xaa	Val	Arg	Xaa	Xaa	Asp	Leu	Cys
1				5					10					15	

Arg

<210> 222

<211> 16

<212> PRT

<213> Conus regius

<220>

<221> SITE

<222> (6)..(13)

<223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 222

Gly	Cys	Cys	Ser	His	Xaa	Ala	Cys	Asn	Val	Asn	Asn	Xaa	His	Ile	Cys
1				5					10					15	

<210> 223

<211> 16

<212> PRT

<213> Conus regius

<220>

<221> SITE

<222> (6)..(12)

<223> Xaa at residue 6 is Pro or hydroxy-Pro; Xaa at  
residue 12 is Tyr, nor-Tyr, nor-Tyr,  
mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr,  
O-phospho-Tyr or nitro-Tyr.

<220>

<221> SITE

<222> (9)

<223> Xaa at residue 9 is Lys, N-methyl-Lys,  
N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 223

Gly	Cys	Cys	Ser	His	Xaa	Val	Cys	Xaa	Val	Arg	Xaa	Ser	Asp	Met	Cys
1				5					10					15	

<210> 224

<211> 17

<212> PRT

<213> Conus stercusmuscarum

<220>

<221> SITE



<222> (7)..(14)

<223> Xaa at residues 7 and 14 is Pro or hydroxy-Pro;  
Xaa at residue 10 is Lys, N-methyl-Lys,  
N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 224

Gly Gly Cys Cys Ser His Xaa Ala Cys Xaa Val His Phe Xaa His Ser  
1 5 10 15

Cys

<210> 225

<211> 20

<212> PRT

<213> Conus stercusmuscarum

<220>

<221> SITE

<222> (6)..(14)

<223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro;  
Xaa at residue 14 is Glu or gamma-carboxy-Glu.

<400> 225

Val Cys Cys Ser Asn Xaa Val Cys His Val Asp His Xaa Xaa Leu Cys  
1 5 10 15

Arg Arg Arg Arg  
20

<210> 226

<211> 17

<212> PRT

<213> Conus striatus

<220>

<221> SITE

<222> (6)..(13)

<223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 226

Gly Cys Cys Ser His Xaa Val Cys Asn Leu Ser Asn Xaa Gln Ile Cys  
1 5 10 15

Arg

<210> 227

<211> 18

<212> PRT

<213> Conus textile

<220>

<221> SITE

<222> (1)..(15)

<223> Xaa at residue 1 is Gln or pyro-Glu; Xaa at  
residues 2 and 15 is Glu or gamma-carboxy-Glu; Xaa  
at residues 7 and 14 is Pro or hydroxy-Pro.

<400> 227

Xaa Xaa Cys Cys Ser His Xaa Ala Cys Asn Val Asp His Xaa Xaa Ile



1 5 10 15

Cys Arg

<210> 228  
 <211> 17  
 <212> PRT  
 <213> Conus tulipa

<220>  
 <221> SITE  
 <222> (6)  
 <223> Xaa at residue 6 is Pro or hydroxy-Pro.

<400> 228  
 Gly Cys Cys Ser Asn Xaa Ala Cys Leu Val Asn His Ile Arg Phe Cys  
 1 5 10 15

Gly

<210> 229  
 <211> 17  
 <212> PRT  
 <213> Conus virgo

<220>  
 <221> SITE  
 <222> (6)..(13)  
 <223> Xaa at residues 6 and 13 is Pro or hydroxy-Pro.

<400> 229  
 Asp Cys Cys Asp Asp Xaa Ala Cys Thr Val Asn Asn Xaa Gly Leu Cys  
 1 5 10 15

Thr

<210> 230  
 <211> 20  
 <212> PRT  
 <213> Conus textile

<220>  
 <221> SITE  
 <222> (6)..(13)  
 <223> Xaa at residues 6, 7 and 13 is Pro or hydroxy-Pro;  
 Xaa at residue 11 is Lys, N-methyl-Lys,  
 N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 230  
 Gly Cys Cys Ser Asn Xaa Xaa Cys Ile Ala Xaa Asn Xaa His Met Cys  
 1 5 10 15

Gly Gly Arg Arg  
 20

<210> 231  
 <211> 18



<212> PRT  
<213> Conus geographus

<220>  
<221> SITE  
<222> (5)..(9)  
<223> Xaa at residue 5 is Pro or hydroxy-Pro; Xaa at residue 8 is Tyr, nor-Tyr, mono-halo-Tyr, di-halo-Tyr, O-sulpho-Tyr, O-phospho-Tyr or nitro-Tyr; Xaa at residue 9 is Glu or

<220>  
<221> SITE  
<222> (9)..(14)  
<223> gamma-carboxy-Glu; Xaa at residues 10, 11, 12 and 14 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 231  
Cys Cys Thr Ile Xaa Ser Cys Xaa Xaa Xaa Xaa Xaa Ile Xaa Ala Cys  
1 5 10 15

Val Phe

<210> 232  
<211> 18  
<212> PRT  
<213> Conus regius

<220>  
<221> SITE  
<222> (6)..(16)  
<223> Xaa at residues 6 and 16 is Pro or hydroxy-Pro; Xaa at residue 13 is Lys, N-methyl-Lys, N,N-dimethyl-Lys or N,N,N-trimethyl-Lys.

<400> 232  
Gly Cys Cys Gly Asn Xaa Ala Cys Ser Gly Ser Ser Xaa Asp Ala Xaa  
1 5 10 15

Ser Cys

<210> 233  
<211> 108  
<212> DNA  
<213> Conus imperialis

<220>  
<221> CDS  
<222> (1)..(105)

<400> 233  
tct gat gga aag agt gcc gcg gcc aaa gcc aaa ccg tct cac ctg acg 48  
Ser Asp Gly Lys Ser Ala Ala Ala Lys Ala Lys Pro Ser His Leu Thr  
1 5 10 15

gct cca ttc atc agg gac gaa tgc tgt tcc gat tct cgc tgt ggc aag 96  
Ala Pro Phe Ile Arg Asp Glu Cys Cys Ser Asp Ser Arg Cys Gly Lys  
20 25 30



aac tgt ctt tga  
Asn Cys Leu  
35

108

<210> 234  
<211> 35  
<212> PRT  
<213> Conus imperialis

<400> 234  
Ser Asp Gly Lys Ser Ala Ala Ala Lys Ala Lys Pro Ser His Leu Thr  
1 5 10 15  
Ala Pro Phe Ile Arg Asp Glu Cys Cys Ser Asp Ser Arg Cys Gly Lys  
20 25 30  
Asn Cys Leu  
35

<210> 235  
<211> 108  
<212> DNA  
<213> Conus imperialis

<220>  
<221> CDS  
<222> (1)..(105)

<400> 235  
ttt gat gga agg aat gcc cca gcc gac gac aaa gcg tct gac ctg atc 48  
Phe Asp Gly Arg Asn Ala Pro Ala Asp Asp Lys Ala Ser Asp Leu Ile  
1 5 10 15  
gct caa atc gtc agg aga gca tgc tgt tcc gat cgt cgc tgt aga tgg 96  
Ala Gln Ile Val Arg Arg Ala Cys Cys Ser Asp Arg Arg Cys Arg Trp  
20 25 30  
agg tgt ggt tga 108  
Arg Cys Gly  
35

<210> 236  
<211> 35  
<212> PRT  
<213> Conus imperialis

<400> 236  
Phe Asp Gly Arg Asn Ala Pro Ala Asp Asp Lys Ala Ser Asp Leu Ile  
1 5 10 15  
Ala Gln Ile Val Arg Arg Ala Cys Cys Ser Asp Arg Arg Cys Arg Trp  
20 25 30  
Arg Cys Gly  
35

<210> 237  
<211> 145  
<212> DNA  
<213> Conus regius



<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 237

tct gat gga agg aat gcc gca gcc gac gcc aga gcg tct gcc cgg atc	48
Ser Asp Gly Arg Asn Ala Ala Ala Asp Ala Arg Ala Ser Pro Arg Ile	
1 5 10 15	
gct ctt ttc ctc agg ttc aca tgc tgt agg aga ggt acc tgt tcc cag	96
Ala Leu Phe Leu Arg Phe Thr Cys Cys Arg Arg Gly Thr Cys Ser Gln	
20 25 30	
cac tgt ggt tgaagacact gctgctccag gaccctctga accacgacgt	145
His Cys Gly	
35	

<210> 238  
 <211> 35  
 <212> PRT  
 <213> Conus regius

<400> 238

Ser Asp Gly Arg Asn Ala Ala Ala Asp Ala Arg Ala Ser Pro Arg Ile	
1 5 10 15	
Ala Leu Phe Leu Arg Phe Thr Cys Cys Arg Arg Gly Thr Cys Ser Gln	
20 25 30	
His Cys Gly	
35	

<210> 239  
 <211> 145  
 <212> DNA  
 <213> Conus regius

<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 239

tct aat gga agg aat gcc gca gcc gac gcc aaa gcg tct caa cgg atc	48
Ser Asn Gly Arg Asn Ala Ala Ala Asp Ala Lys Ala Ser Gln Arg Ile	
1 5 10 15	
gct cca ttc ctc agg gac tat tgc tgt agg aga cat gcc tgt acg ttg	96
Ala Pro Phe Leu Arg Asp Tyr Cys Cys Arg Arg His Ala Cys Thr Leu	
20 25 30	
att tgt ggt tgaagacgct gctgctccag gaccctctga accacgacgt	145
Ile Cys Gly	
35	

<210> 240  
 <211> 35  
 <212> PRT  
 <213> Conus regius

<400> 240

Ser Asn Gly Arg Asn Ala Ala Ala Asp Ala Lys Ala Ser Gln Arg Ile
---



1                      5                      10                      15  
 Ala Pro Phe Leu Arg Asp Tyr Cys Cys Arg Arg His Ala Cys Thr Leu  
                     20                      25                      30  
 Ile Cys Gly  
                     35

<210> 241  
 <211> 145  
 <212> DNA  
 <213> Conus regius

<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 241  
 tct aat gga agg aat gcc gca gcc gac gcc aaa gcg tct caa cgg atc 48  
 Ser Asn Gly Arg Asn Ala Ala Ala Asp Ala Lys Ala Ser Gln Arg Ile  
   1                      5                      10                      15  
 gct cca ttc ctc agg gac tat tgc tgt agg aga cct ccc tgt acg ttg 96  
 Ala Pro Phe Leu Arg Asp Tyr Cys Cys Arg Arg Pro Pro Cys Thr Leu  
                     20                      25                      30  
 att tgt ggt tgaagacgct gctgctccag gacccctctga accacgacgt 145  
 Ile Cys Gly  
                     35

<210> 242  
 <211> 35  
 <212> PRT  
 <213> Conus regius

<400> 242  
 Ser Asn Gly Arg Asn Ala Ala Ala Asp Ala Lys Ala Ser Gln Arg Ile  
   1                      5                      10                      15  
 Ala Pro Phe Leu Arg Asp Tyr Cys Cys Arg Arg Pro Pro Cys Thr Leu  
                     20                      25                      30  
 Ile Cys Gly  
                     35

<210> 243  
 <211> 136  
 <212> DNA  
 <213> Conus regius

<220>  
 <221> CDS  
 <222> (1)..(96)

<400> 243  
 tct aat aaa agg aag aat gcc gca atg ctt gac atg atc gct caa cac 48  
 Ser Asn Lys Arg Lys Asn Ala Ala Met Leu Asp Met Ile Ala Gln His  
   1                      5                      10                      15  
 gcc ata agg ggt tgc tgt tcc gat cct cgc tgt aga tat aga tgt cgt 96  
 Ala Ile Arg Gly Cys Cys Ser Asp Pro Arg Cys Arg Tyr Arg Cys Arg



90

20

25

30

tgaagacgct gctgctccag gaccctctga accacgacgt

136

&lt;210&gt; 244

&lt;211&gt; 32

&lt;212&gt; PRT

&lt;213&gt; Conus regius

&lt;400&gt; 244

Ser	Asn	Lys	Arg	Lys	Asn	Ala	Ala	Met	Leu	Asp	Met	Ile	Ala	Gln	His
1				5					10					15	

Ala	Ile	Arg	Gly	Cys	Cys	Ser	Asp	Pro	Arg	Cys	Arg	Tyr	Arg	Cys	Arg
			20					25					30		

&lt;210&gt; 245

&lt;211&gt; 145

&lt;212&gt; DNA

&lt;213&gt; Conus regius

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(105)

&lt;400&gt; 245

ttt	aat	gga	agg	agt	gcc	gca	gcc	gac	caa	aat	gcg	cct	ggc	ctg	atc	48
Phe	Asn	Gly	Arg	Ser	Ala	Ala	Ala	Asp	Gln	Asn	Ala	Pro	Gly	Leu	Ile	
1				5					10					15		

gct	caa	gtc	gtc	aga	gga	ggg	tgc	tgt	tcc	gat	ccc	cgc	tgc	gcc	tg	96
Ala	Gln	Val	Val	Arg	Gly	Gly	Cys	Cys	Ser	Asp	Pro	Arg	Cys	Ala	Trp	
			20				25						30			

aga	tgt	ggt	tgaagacggt	gctgctccag	gaccctctga	accacgacgt	145
Arg	Cys	Gly					
		35					

&lt;210&gt; 246

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Conus regius

&lt;400&gt; 246

Phe	Asn	Gly	Arg	Ser	Ala	Ala	Ala	Asp	Gln	Asn	Ala	Pro	Gly	Leu	Ile
1				5					10					15	

Ala	Gln	Val	Val	Arg	Gly	Gly	Cys	Cys	Ser	Asp	Pro	Arg	Cys	Ala	Trp
			20				25						30		

Arg	Cys	Gly	
		35	

&lt;210&gt; 247

&lt;211&gt; 145

&lt;212&gt; DNA

&lt;213&gt; Conus regius

&lt;220&gt;

&lt;221&gt; CDS



&lt;222&gt; (1)..(105)

&lt;400&gt; 247

ttt gat gga agg aat gcc gca gcc gac gcc aaa gtg att aac acg gtc	48
Phe Asp Gly Arg Asn Ala Ala Ala Asp Ala Lys Val Ile Asn Thr Val	
1 5 10 15	

gct cga atc gcc tgg gat ata tgc tgt tcc gaa cct gac tgt aac cat	96
Ala Arg Ile Ala Trp Asp Ile Cys Cys Ser Glu Pro Asp Cys Asn His	
20 25 30	

aaa tgt gtt tgaagacgct tctgctccag gaccctctga accacgacgt	145
Lys Cys Val	
35	

&lt;210&gt; 248

&lt;211&gt; 35

&lt;212&gt; PRT

&lt;213&gt; Conus regius

&lt;400&gt; 248

Phe Asp Gly Arg Asn Ala Ala Ala Asp Ala Lys Val Ile Asn Thr Val	15
1 5 10	

Ala Arg Ile Ala Trp Asp Ile Cys Cys Ser Glu Pro Asp Cys Asn His	30
20 25	

Lys Cys Val	35
-------------	----

&lt;210&gt; 249

&lt;211&gt; 136

&lt;212&gt; DNA

&lt;213&gt; Conus regius

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(96)

&lt;400&gt; 249

tct aat aaa agg aag aat gcc gca atg ctt gac atg atc gct caa cac	48
Ser Asn Lys Arg Lys Asn Ala Ala Met Leu Asp Met Ile Ala Gln His	
1 5 10 15	

gcc ata agg ggt tgc tgt tcc gat cct cgc tgt aaa cat cag tgt ggt	96
Ala Ile Arg Gly Cys Cys Ser Asp Pro Arg Cys Lys His Gln Cys Gly	
20 25 30	

tgaagacgct gctgctccag gaccctctga accacgacgt	136
---	-----

&lt;210&gt; 250

&lt;211&gt; 32

&lt;212&gt; PRT

&lt;213&gt; Conus regius

&lt;400&gt; 250

Ser Asn Lys Arg Lys Asn Ala Ala Met Leu Asp Met Ile Ala Gln His	15
1 5 10	

Ala Ile Arg Gly Cys Cys Ser Asp Pro Arg Cys Lys His Gln Cys Gly	30
20 25	



<210> 251  
 <211> 136  
 <212> DNA  
 <213> Conus musicus

<220>  
 <221> CDS  
 <222> (1)..(105)

<400> 251  
 atc aag aat aca gca gcc agc aac aaa gcg tct agc ctg gtg gct ctt 48  
 Ile Lys Asn Thr Ala Ala Ser Asn Lys Ala Ser Ser Leu Val Ala Leu  
 1 5 10 15  
 gtt gtc agg gga tgc tgt tac aat cct gtc tgc aag aaa tat tat tgt 96  
 Val Val Arg Gly Cys Cys Tyr Asn Pro Val Cys Lys Lys Tyr Tyr Cys  
 20 25 30  
 tgg aaa ggc tgatgctcca ggaccctctg aaccacgacg t 136  
 Trp Lys Gly  
 35

<210> 252  
 <211> 35  
 <212> PRT  
 <213> Conus musicus

<400> 252  
 ile lys asn thr ala ala ser asn lys ala ser ser leu val ala leu  
 1 5 10 15  
 val val arg gly cys cys tyr asn pro val cys lys lys tyr tyr cys  
 20 25 30  
 Trp Lys Gly  
 35

<210> 253  
 <211> 148  
 <212> DNA  
 <213> Conus purpurascens

<220>  
 <221> CDS  
 <222> (1)..(117)

<400> 253  
 tct gaa ggc agg aat gct gaa gcc atc gac aac gcc tta gac cag agg 48  
 Ser Glu Gly Arg Asn Ala Glu Ala Ile Asp Asn Ala Leu Asp Gln Arg  
 1 5 10 15  
 gat cca aag cga cag gag ccg ggg tgc tgt agg cat cct gcc tgt ggg 96  
 Asp Pro Lys Arg Gln Glu Pro Gly Cys Cys Arg His Pro Ala Cys Gly  
 20 25 30  
 aag aac aga tgt gga aga cgc tgatgctcca ggaccctctg aaccacgacg t 148  
 Lys Asn Arg Cys Gly Arg Arg  
 35

<210> 254



<211> 39  
 <212> PRT  
 <213> Conus purpurascens

<400> 254  
 Ser Glu Gly Arg Asn Ala Glu Ala Ile Asp Asn Ala Leu Asp Gln Arg  
 1 5 10 15  
 Asp Pro Lys Arg Gln Glu Pro Gly Cys Cys Arg His Pro Ala Cys Gly  
 20 25 30  
 Lys Asn Arg Cys Gly Arg Arg  
 35

<210> 255  
 <211> 156  
 <212> DNA  
 <213> Conus musicus

<220>  
 <221> CDS  
 <222> (1)..(102)

<400> 255  
 tct gat ggc agg aat att gca gtc gac gac aga tgg tct ttc tat acg 48  
 Ser Asp Gly Arg Asn Ile Ala Val Asp Asp Arg Trp Ser Phe Tyr Thr  
 1 5 10 15  
 ctc ttc cat gct act tgc tgt gcc gat cct gac tgt aga ttc cgg ccc 96  
 Leu Phe His Ala Thr Cys Cys Ala Asp Pro Asp Cys Arg Phe Arg Pro  
 20 25 30  
 ggt tgt tgatctttgt tcttcaaaga cgctgctggc ccaggaccct ctgaaccacg 152  
 Gly Cys  
 acgt 156

<210> 256  
 <211> 34  
 <212> PRT  
 <213> Conus musicus

<400> 256  
 Ser Asp Gly Arg Asn Ile Ala Val Asp Asp Arg Trp Ser Phe Tyr Thr  
 1 5 10 15  
 Leu Phe His Ala Thr Cys Cys Ala Asp Pro Asp Cys Arg Phe Arg Pro  
 20 25 30  
 Gly Cys

<210> 257  
 <211> 142  
 <212> DNA  
 <213> Conus musicus

<220>  
 <221> CDS  
 <222> (1)..(102)



&lt;400&gt; 257

atc aag aat act gca gcc agc aac aaa gcg cct agc ctg gtg gct att 48  
 Ile Lys Asn Thr Ala Ala Ser Asn Lys Ala Pro Ser Leu Val Ala Ile  
 1 5 10 15

gcc gtc agg gga tgc tgt tac aat cct tcc tgt tgg ccg aaa aca tat 96  
 Ala Val Arg Gly Cys Cys Tyr Asn Pro Ser Cys Trp Pro Lys Thr Tyr  
 20 25 30

tgt agt tggaaaggct gatgctccag gaccctctga accacgacgt 142  
 Cys Ser

&lt;210&gt; 258

&lt;211&gt; 34

&lt;212&gt; PRT

&lt;213&gt; Conus musicus

&lt;400&gt; 258

Ile Lys Asn Thr Ala Ala Ser Asn Lys Ala Pro Ser Leu Val Ala Ile  
 1 5 10 15

Ala Val Arg Gly Cys Cys Tyr Asn Pro Ser Cys Trp Pro Lys Thr Tyr  
 20 25 30

Cys Ser

&lt;210&gt; 259

&lt;211&gt; 161

&lt;212&gt; DNA

&lt;213&gt; Conus musicus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(108)

&lt;400&gt; 259

tct gat agc agg aat gtc gca atc gag gac aga gtg tct gac ctg cac 48  
 Ser Asp Ser Arg Asn Val Ala Ile Glu Asp Arg Val Ser Asp Leu His  
 1 5 10 15

tct atg ttc ttc gat gtc tct tgc tgt agc aat cct acc tgt aaa gaa 96  
 Ser Met Phe Phe Asp Val Ser Cys Cys Ser Asn Pro Thr Cys Lys Glu  
 20 25 30

acg tat ggt tgt tgatcggttg ttttgaagac gctgatgctc caggaccctc 148  
 Thr Tyr Gly Cys  
 35

tgaaccacga cgt 161

&lt;210&gt; 260

&lt;211&gt; 36

&lt;212&gt; PRT

&lt;213&gt; Conus musicus

&lt;400&gt; 260

Ser Asp Ser Arg Asn Val Ala Ile Glu Asp Arg Val Ser Asp Leu His  
 1 5 10 15

Ser Met Phe Phe Asp Val Ser Cys Cys Ser Asn Pro Thr Cys Lys Glu



95

20

25

30

Thr Tyr Gly Cys  
35

<210> 261  
<211> 156  
<212> DNA  
<213> Conus musicus

<220>  
<221> CDS  
<222> (1)..(102)

<400> 261  
tct gtt ggc agg aat att gca gtc gac gac aga ggg att ttc tct acg 48  
Ser Val Gly Arg Asn Ile Ala Val Asp Asp Arg Gly Ile Phe Ser Thr  
1 5 10 15  
ctc ttc cat gct cat tgc tgt gcc aat ccc atc tgt aaa aac acg ccc 96  
Leu Phe His Ala His Cys Cys Ala Asn Pro Ile Cys Lys Asn Thr Pro  
20 25 30  
ggc tgt tgatctttgt tcttcaaaga cgctgctggc ccaggaccct ctgaaccacg 152  
Gly Cys  
acgt 156

<210> 262  
<211> 34  
<212> PRT  
<213> Conus musicus

<400> 262  
Ser Val Gly Arg Asn Ile Ala Val Asp Asp Arg Gly Ile Phe Ser Thr  
1 5 10 15  
Leu Phe His Ala His Cys Cys Ala Asn Pro Ile Cys Lys Asn Thr Pro  
20 25 30  
Gly Cys

<210> 263  
<211> 161  
<212> DNA  
<213> Conus musicus

<220>  
<221> CDS  
<222> (1)..(108)

<400> 263  
tcc gat ggc agg aat gtc gca atc gac gac aga gtg tct gac ctg cac 48  
Ser Asp Gly Arg Asn Val Ala Ile Asp Asp Arg Val Ser Asp Leu His  
1 5 10 15  
tct atg ttc ttc gat att gct tgc tgt aac aat cct acc tgt aaa gaa 96  
Ser Met Phe Phe Asp Ile Ala Cys Cys Asn Asn Pro Thr Cys Lys Glu  
20 25 30



acg tat ggt tgt tgatcggtgg ttttgaagac gctgatgctc caggaccctc 148  
 Thr Tyr Gly Cys  
                   35

tgaaccacga cgt 161

<210> 264  
 <211> 36  
 <212> PRT  
 <213> Conus musicus

<400> 264  
 Ser Asp Gly Arg Asn Val Ala Ile Asp Asp Arg Val Ser Asp Leu His  
   1                  5                  10                  15

Ser Met Phe Phe Asp Ile Ala Cys Cys Asn Asn Pro Thr Cys Lys Glu  
                   20                  25                  30

Thr Tyr Gly Cys  
                   35

<210> 265  
 <211> 161  
 <212> DNA  
 <213> Conus musicus

<220>  
 <221> CDS  
 <222> (1)..(108)

<400> 265  
 tct gat ggc agg aat gtc gca atc gag gac aga gtg tct gac ctg ctc 48  
 Ser Asp Gly Arg Asn Val Ala Ile Glu Asp Arg Val Ser Asp Leu Leu  
   1                  5                  10                  15

tct atg ctc ttc gat gtt gct tgc tgt agc aat cct gtc tgt aaa gaa 96  
 Ser Met Leu Phe Asp Val Ala Cys Cys Ser Asn Pro Val Cys Lys Glu  
                   20                  25                  30

acg tat ggt tgt tgatcggtgg ttttgaagac gctgatgctc caggaccctc 148  
 Thr Tyr Gly Cys  
                   35

tgaaccacga cgt 161

<210> 266  
 <211> 36  
 <212> PRT  
 <213> Conus musicus

<400> 266  
 Ser Asp Gly Arg Asn Val Ala Ile Glu Asp Arg Val Ser Asp Leu Leu  
   1                  5                  10                  15

Ser Met Leu Phe Asp Val Ala Cys Cys Ser Asn Pro Val Cys Lys Glu  
                   20                  25                  30

Thr Tyr Gly Cys  
                   35



<210> 267  
 <211> 154  
 <212> DNA  
 <213> Conus betulinus

<220>  
 <221> CDS  
 <222> (1)..(123)

<400> 267  
 tat gat ggc agg aat gct gcc gcc gac gac aaa gct ttt gac ctg ctg 48  
 Tyr Asp Gly Arg Asn Ala Ala Ala Asp Asp Lys Ala Phe Asp Leu Leu  
 1 5 10 15  
 gct atg acc ata agg gga gga tgc tgt tcc tat cct ccc tgt atc gcg 96  
 Ala Met Thr Ile Arg Gly Gly Cys Cys Ser Tyr Pro Pro Cys Ile Ala  
 20 25 30  
 agt aat cct aaa tgt ggt gga aga cgc tgatgctcca ggaccctctg 143  
 Ser Asn Pro Lys Cys Gly Gly Arg Arg  
 35 40  
 aaccacaacg t 154

<210> 268  
 <211> 41  
 <212> PRT  
 <213> Conus betulinus

<400> 268  
 Tyr Asp Gly Arg Asn Ala Ala Ala Asp Asp Lys Ala Phe Asp Leu Leu  
 1 5 10 15  
 Ala Met Thr Ile Arg Gly Gly Cys Cys Ser Tyr Pro Pro Cys Ile Ala  
 20 25 30  
 Ser Asn Pro Lys Cys Gly Gly Arg Arg  
 35 40

<210> 269  
 <211> 151  
 <212> DNA  
 <213> Conus lividus

<220>  
 <221> CDS  
 <222> (1)..(111)

<400> 269  
 ttt gat ggc agg aat gct gca ggc aac gcc aaa atg tcc gcc ctg atg 48  
 Phe Asp Gly Arg Asn Ala Ala Gly Asn Ala Lys Met Ser Ala Leu Met  
 1 5 10 15  
 gcc ctg acc atc agg gga tgc tgt tcc cat cct gtc tgt agc gcg atg 96  
 Ala Leu Thr Ile Arg Gly Cys Cys Ser His Pro Val Cys Ser Ala Met  
 20 25 30  
 agt cca atc tgt ggc tgaagacgct gatgccccag gaccctctga accacgacgt 151  
 Ser Pro Ile Cys Gly  
 35



<210> 270  
 <211> 37  
 <212> PRT  
 <213> Conus lividus

<400> 270  
 Phe Asp Gly Arg Asn Ala Ala Gly Asn Ala Lys Met Ser Ala Leu Met  
   1                  5                  10                  15  
 Ala Leu Thr Ile Arg Gly Cys Cys Ser His Pro Val Cys Ser Ala Met  
                   20                  25                  30  
 Ser Pro Ile Cys Gly  
                   35

<210> 271  
 <211> 196  
 <212> DNA  
 <213> Conus musicus

<220>  
 <221> CDS  
 <222> (1)..(165)

<400> 271  
 atc aag aat gct gca gct gac gac aaa gca tct gac ctg ctc tct cag 48  
 Ile Lys Asn Ala Ala Ala Asp Asp Lys Ala Ser Asp Leu Leu Ser Gln  
   1                  5                  10                  15  
 atc gtc agg aat gct gca tcc aat gac aaa ggg tct gac ctg atg act 96  
 Ile Val Arg Asn Ala Ala Ser Asn Asp Lys Gly Ser Asp Leu Met Thr  
                   20                  25                  30  
 ctt gcc ctc agg gga tgc tgt aaa aat cct tac tgt ggt gcg tcg aaa 144  
 Leu Ala Leu Arg Gly Cys Cys Lys Asn Pro Tyr Cys Gly Ala Ser Lys  
                   35                  40                  45  
 aca tat tgt ggt aga aga cgc tgatgctcca ggaccctctg aaccacgacg t 196  
 Thr Tyr Cys Gly Arg Arg Arg  
   50                  55

<210> 272  
 <211> 55  
 <212> PRT  
 <213> Conus musicus

<400> 272  
 Ile Lys Asn Ala Ala Ala Asp Asp Lys Ala Ser Asp Leu Leu Ser Gln  
   1                  5                  10                  15  
 Ile Val Arg Asn Ala Ala Ser Asn Asp Lys Gly Ser Asp Leu Met Thr  
                   20                  25                  30  
 Leu Ala Leu Arg Gly Cys Cys Lys Asn Pro Tyr Cys Gly Ala Ser Lys  
                   35                  40                  45  
 Thr Tyr Cys Gly Arg Arg Arg  
   50                  55

<210> 273  
 <211> 139



&lt;212&gt; DNA

&lt;213&gt; Conus omaria

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (40)..(108)

&lt;400&gt; 273

tctgatggca ggaatgccgc agcgtctgac ctgatggat ctg acc atc aag gga 54  
 Leu Thr Ile Lys Gly  
 1 5

tgc tgt tct tat cct ccc tgt ttc gcg act aat gca gac tgt ggt cga 102  
 Cys Cys Ser Tyr Pro Pro Cys Phe Ala Thr Asn Pro Asp Cys Gly Arg  
 10 15 20

cga cgc tgatgctcca ggaccctctg aaccacgacg t 139  
 Arg Arg

&lt;210&gt; 274

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Conus omaria

&lt;400&gt; 274

Leu Thr Ile Lys Gly Cys Cys Ser Tyr Pro Pro Cys Phe Ala Thr Asn  
 1 5 10 15

Pro Asp Cys Gly Arg Arg Arg  
 20

&lt;210&gt; 275

&lt;211&gt; 126

&lt;212&gt; DNA

&lt;213&gt; Conus radiatus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(123)

&lt;400&gt; 275

ttt gat ggc agg aat gcc gca gcc gac tac aaa ggg tct gaa ttg ctc 48  
 Phe Asp Gly Arg Asn Ala Ala Ala Asp Tyr Lys Gly Ser Glu Leu Leu  
 1 5 10 15

gct atg acc gtc agg gga gga tgc tgt tcc tat cct ccc tgt atc gca 96  
 Ala Met Thr Val Arg Gly Gly Cys Cys Ser Tyr Pro Pro Cys Ile Ala  
 20 25 30

aat aat cct ctt tgt gct gga aga cgc tga 126  
 Asn Asn Pro Leu Cys Ala Gly Arg Arg  
 35 40

&lt;210&gt; 276

&lt;211&gt; 41

&lt;212&gt; PRT

&lt;213&gt; Conus radiatus

&lt;400&gt; 276

Phe Asp Gly Arg Asn Ala Ala Ala Asp Tyr Lys Gly Ser Glu Leu Leu  
 1 5 10 15



Ala Met Thr Val Arg Gly Gly Cys Cys Ser Tyr Pro Pro Cys Ile Ala  
                     20                    25                    30

Asn Asn Pro Leu Cys Ala Gly Arg Arg  
           35                    40

<210> 277  
 <211> 126  
 <212> DNA  
 <213> Conus radiatus

<220>  
 <221> CDS  
 <222> (1)..(123)

<400> 277  
 ttt gat ggc agg aat gcc gca gcc gac tac aaa ggg tct gaa ttg ctc 48  
 Phe Asp Gly Arg Asn Ala Ala Ala Asp Tyr Lys Gly Ser Glu Leu Leu  
   1                    5                    10                    15  
 gct atg acc gtc agg gga gga tgc tgt tcc tat cct ccc tgt atc gca 96  
 Ala Met Thr Val Arg Gly Gly Cys Cys Ser Tyr Pro Pro Cys Ile Ala  
                     20                    25                    30  
 aat aat cct ttt tgt gct gga aga cgc tga 126  
 Asn Asn Pro Phe Cys Ala Gly Arg Arg  
           35                    40

<210> 278  
 <211> 41  
 <212> PRT  
 <213> Conus radiatus

<400> 278  
 Phe Asp Gly Arg Asn Ala Ala Ala Asp Tyr Lys Gly Ser Glu Leu Leu  
   1                    5                    10                    15  
 Ala Met Thr Val Arg Gly Gly Cys Cys Ser Tyr Pro Pro Cys Ile Ala  
                     20                    25                    30  
 Asn Asn Pro Phe Cys Ala Gly Arg Arg  
           35                    40

<210> 279  
 <211> 155  
 <212> DNA  
 <213> Conus virgo

<220>  
 <221> CDS  
 <222> (1)..(114)

<400> 279  
 tct tat gac agg tat gcc tcg ccc gtc gac aga gcg tct gcc ctg atc 48  
 Ser Tyr Asp Arg Tyr Ala Ser Pro Val Asp Arg Ala Ser Ala Leu Ile  
   1                    5                    10                    15  
 gct cag gcc atc ctt cga gat tgc tgt tcc aat cct ccc tgt tcc caa 96  
 Ala Gln Ala Ile Leu Arg Asp Cys Cys Ser Asn Pro Pro Cys Ser Gln  
                     20                    25                    30



aat aat cca gac tgt atg taaagacgct gcttgctcca ggaccctctg 144  
 Asn Asn Pro Asp Cys Met  
 35

aaccacgacg t 155

<210> 280  
 <211> 38  
 <212> PRT  
 <213> Conus virgo

<400> 280  
 Ser Tyr Asp Arg Tyr Ala Ser Pro Val Asp Arg Ala Ser Ala Leu Ile  
 1 5 10 15  
 Ala Gln Ala Ile Leu Arg Asp Cys Cys Ser Asn Pro Pro Cys Ser Gln  
 20 25 30  
 Asn Asn Pro Asp Cys Met  
 35

<210> 281  
 <211> 155  
 <212> DNA  
 <213> Conus virgo

<220>  
 <221> CDS  
 <222> (1)..(114)

<400> 281  
 tct tat ggc agg tat gcc tca ccc gtc gac aga gcg tct gcc ctg atc 48  
 Ser Tyr Gly Arg Tyr Ala Ser Pro Val Asp Arg Ala Ser Ala Leu Ile  
 1 5 10 15

gct cag gcc atc ctt cga gat tgc tgc tcc aat cct cct tgt gcc cat 96  
 Ala Gln Ala Ile Leu Arg Asp Cys Cys Ser Asn Pro Pro Cys Ala His  
 20 25 30

aat aat cca gac tgt cgt taaagacgct gcttgctcca ggaccctctg 144  
 Asn Asn Pro Asp Cys Arg  
 35

aaccacgacg t 155

<210> 282  
 <211> 38  
 <212> PRT  
 <213> Conus virgo

<400> 282  
 Ser Tyr Gly Arg Tyr Ala Ser Pro Val Asp Arg Ala Ser Ala Leu Ile  
 1 5 10 15  
 Ala Gln Ala Ile Leu Arg Asp Cys Cys Ser Asn Pro Pro Cys Ala His  
 20 25 30  
 Asn Asn Pro Asp Cys Arg  
 35



<210> 283  
 <211> 126  
 <212> DNA  
 <213> Conus achatinus

<220>  
 <221> CDS  
 <222> (1)..(123)

<400> 283  
 tct gat ggc agg aat gcc gca gcc aac gac aaa ggc tct ggc atg agc 48  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Ala Ser Gly Met Ser  
 1 5 10 15  
 gcg ctg gcc gtc aat gaa tgc tgt acc aac cct gtc tgt cac gcg gaa 96  
 Ala Leu Ala Val Asn Glu Cys Cys Thr Asn Pro Val Cys His Ala Glu  
 20 25 30  
 cat caa gaa ctt tgt gct aga aga cgc tga 126  
 His Gln Glu Leu Cys Ala Arg Arg Arg  
 35 40

<210> 284  
 <211> 41  
 <212> PRT  
 <213> Conus achatinus

<400> 284  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Ala Ser Gly Met Ser  
 1 5 10 15  
 Ala Leu Ala Val Asn Glu Cys Cys Thr Asn Pro Val Cys His Ala Glu  
 20 25 30  
 His Gln Glu Leu Cys Ala Arg Arg Arg  
 35 40

<210> 285  
 <211> 126  
 <212> DNA  
 <213> Conus achatinus

<220>  
 <221> CDS  
 <222> (1)..(123)

<400> 285  
 tct gat ggc agg aat gcc gca gcc aac gac aaa ggc tct gac gtg atc 48  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Ala Ser Asp Val Ile  
 1 5 10 15  
 acg ctg gcc ctc aag gga tgc tgt tcc aac cct gtc tgt cac ttg gag 96  
 Thr Leu Ala Leu Lys Gly Cys Cys Ser Asn Pro Val Cys His Leu Glu  
 20 25 30  
 cat tca aac ctt tgt ggt aga aga cgc tga 126  
 His Ser Asn Leu Cys Gly Arg Arg Arg  
 35 40

<210> 286  
 <211> 41



&lt;212&gt; PRT

&lt;213&gt; Conus achatinus

&lt;400&gt; 286

Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Ala Ser Asp Val Ile  
 1 5 10 15

Thr Leu Ala Leu Lys Gly Cys Cys Ser Asn Pro Val Cys His Leu Glu  
 20 25 30

His Ser Asn Leu Cys Gly Arg Arg Arg  
 35 40

&lt;210&gt; 287

&lt;211&gt; 126

&lt;212&gt; DNA

&lt;213&gt; Conus achatinus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(123)

&lt;400&gt; 287

tct gat ggc agg aat gcc gca gcc aac gac aaa gcg tct ggc atg agc 48  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Ala Ser Gly Met Ser  
 1 5 10 15

gcg ctg gcc gtc aat gaa tgc tgt acc aac cct gtc tgt cac gtg gaa 96  
 Ala Leu Ala Val Asn Glu Cys Cys Thr Asn Pro Val Cys His Val Glu  
 20 25 30

cat caa gaa ctt tgt gct aga aga cgc tga 126  
 His Gln Glu Leu Cys Ala Arg Arg Arg  
 35 40

&lt;210&gt; 288

&lt;211&gt; 41

&lt;212&gt; PRT

&lt;213&gt; Conus achatinus

&lt;400&gt; 288

Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Ala Ser Gly Met Ser  
 1 5 10 15

Ala Leu Ala Val Asn Glu Cys Cys Thr Asn Pro Val Cys His Val Glu  
 20 25 30

His Gln Glu Leu Cys Ala Arg Arg Arg  
 35 40

&lt;210&gt; 289

&lt;211&gt; 220

&lt;212&gt; DNA

&lt;213&gt; Conus ammiralis

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(180)

&lt;400&gt; 289

atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48



Met	Phe	Thr	Val	Phe	Leu	Leu	Val	Val	Leu	Ala	Thr	Thr	Val	Val	Ser	
1				5					10					15		
ttc	act	tca	gat	cgt	gca	ttt	cgt	ggc	agg	aat	gcc	gca	gcc	aaa	gcg	96
Phe	Thr	Ser	Asp	Arg	Ala	Phe	Arg	Gly	Arg	Asn	Ala	Ala	Ala	Lys	Ala	
			20					25					30			
tct	ggc	ctg	gtc	ggg	ctg	acc	gac	aag	agg	caa	gaa	tgc	tgt	tct	tat	144
Ser	Gly	Leu	Val	Gly	Leu	Thr	Asp	Lys	Arg	Gln	Glu	Cys	Cys	Ser	Tyr	
		35					40					45				
cct	gcc	tgt	aac	cta	gat	cat	cca	gaa	ctt	tgt	ggg	tgaagacgct				190
Pro	Ala	Cys	Asn	Leu	Asp	His	Pro	Glu	Leu	Cys	Gly					
	50					55					60					
gatgctccag gaccctctga accacgacgt																220
<210> 290																
<211> 60																
<212> PRT																
<213> Conus ammiralis																
<400> 290																
Met	Phe	Thr	Val	Phe	Leu	Leu	Val	Val	Leu	Ala	Thr	Thr	Val	Val	Ser	
1				5					10					15		
Phe	Thr	Ser	Asp	Arg	Ala	Phe	Arg	Gly	Arg	Asn	Ala	Ala	Ala	Lys	Ala	
			20					25					30			
Ser	Gly	Leu	Val	Gly	Leu	Thr	Asp	Lys	Arg	Gln	Glu	Cys	Cys	Ser	Tyr	
		35					40					45				
Pro	Ala	Cys	Asn	Leu	Asp	His	Pro	Glu	Leu	Cys	Gly					
	50					55					60					
<210> 291																
<211> 223																
<212> DNA																
<213> Conus ammiralis																
<220>																
<221> CDS																
<222> (1)..(192)																
<400> 291																
atg	ttc	acc	gtg	ttt	ctg	ttg	gtt	gtc	ttg	gca	acc	act	gtc	gtt	tcc	48
Met	Phe	Thr	Val	Phe	Leu	Leu	Val	Val	Leu	Ala	Thr	Thr	Val	Val	Ser	
1				5					10					15		
tcc	act	tca	ggg	cgt	cgt	gca	ttt	cgt	ggc	agg	aat	gcc	gca	gcc	aaa	96
Ser	Thr	Ser	Gly	Arg	Arg	Ala	Phe	Arg	Gly	Arg	Asn	Ala	Ala	Ala	Lys	
			20					25					30			
gcg	tct	gga	ctg	gtc	ggg	ctg	act	gac	agg	aga	cca	gaa	tgc	tgt	agt	144
Ala	Ser	Gly	Leu	Val	Gly	Leu	Thr	Asp	Arg	Arg	Pro	Glu	Cys	Cys	Ser	
		35					40					45				
gat	cct	cgc	tgt	aac	tcg	act	cat	cca	gaa	ctt	tgt	ggg	gga	aga	cgc	192
Asp	Pro	Arg	Cys	Asn	Ser	Thr	His	Pro	Glu	Leu	Cys	Gly	Gly	Arg	Arg	
	50					55					60					
tgatgctcca ggaccctctg aaccacgacg t																223



<210> 292  
 <211> 64  
 <212> PRT  
 <213> *Conus ammiralis*

<400> 292  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
   1                  5                  10                  15  
 Ser Thr Ser Gly Arg Arg Ala Phe Arg Gly Arg Asn Ala Ala Ala Lys  
           20                  25                  30  
 Ala Ser Gly Leu Val Gly Leu Thr Asp Arg Arg Pro Glu Cys Cys Ser  
           35                  40                  45  
 Asp Pro Arg Cys Asn Ser Thr His Pro Glu Leu Cys Gly Gly Arg Arg  
   50                  55                  60

<210> 293  
 <211> 151  
 <212> DNA  
 <213> *Conus arenatus*

<220>  
 <221> CDS  
 <222> (1)..(120)

<400> 293  
 tct gat ggc agg aat gcc gca gcc aac gcg ttt gac ctg atc gat ctg 48  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Ala Phe Asp Leu Ile Asp Leu  
   1                  5                  10                  15  
 acc gcc agg cta aat tgc tgt atg att ccc ccc tgt tgg aag aaa tat 96  
 Thr Ala Arg Leu Asn Cys Cys Met Ile Pro Pro Cys Trp Lys Lys Tyr  
           20                  25                  30  
 gga gac aga tgt agt gaa gta cgc tgatgctcca ggaccctctg aaccacgacg 150  
 Gly Asp Arg Cys Ser Glu Val Arg  
           35                  40  
 t 151

<210> 294  
 <211> 40  
 <212> PRT  
 <213> *Conus arenatus*

<400> 294  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Ala Phe Asp Leu Ile Asp Leu  
   1                  5                  10                  15  
 Thr Ala Arg Leu Asn Cys Cys Met Ile Pro Pro Cys Trp Lys Lys Tyr  
           20                  25                  30  
 Gly Asp Arg Cys Ser Glu Val Arg  
           35                  40

<210> 295  
 <211> 126  
 <212> DNA



<213> Conus arenatus

<220>

<221> CDS

<222> (1)..(93)

<400> 295

tct gat ggc agg aat gcc gca cgc aaa gcg ttt ggc tgc tgc gac tta	48
Ser Asp Gly Arg Asn Ala Ala Arg Lys Ala Phe Gly Cys Cys Asp Leu	
1 5 10 15	
ata ccc tgt ttg gag aga tat ggt aac aga tgt aat gaa gtg cac	93
Ile Pro Cys Leu Glu Arg Tyr Gly Asn Arg Cys Asn Glu Val His	
20 25 30	
tgatgctcca ggaccctctg aaccacgcga cgt	126

<210> 296

<211> 31

<212> PRT

<213> Conus arenatus

<400> 296

Ser Asp Gly Arg Asn Ala Ala Arg Lys Ala Phe Gly Cys Cys Asp Leu	
1 5 10 15	
Ile Pro Cys Leu Glu Arg Tyr Gly Asn Arg Cys Asn Glu Val His	
20 25 30	

<210> 297

<211> 151

<212> DNA

<213> Conus arenatus

<220>

<221> CDS

<222> (1)..(120)

<400> 297

tct gat ggc agc aat gcc gca gcc aac gag ttt gac ctg atc gct ctg	48
Ser Asp Gly Ser Asn Ala Ala Ala Asn Glu Phe Asp Leu Ile Ala Leu	
1 5 10 15	
acc gcc agg cta ggt tgc tgt aac gtt aca ccc tgt tgg gag aaa tat	96
Thr Ala Arg Leu Gly Cys Cys Asn Val Thr Pro Cys Trp Glu Lys Tyr	
20 25 30	
gga gac aaa tgt aat gaa gta cgc tgatgcttca ggaccctctg aaccacgcag	150
Gly Asp Lys Cys Asn Glu Val Arg	
35 40	
t	151

<210> 298

<211> 40

<212> PRT

<213> Conus arenatus

<400> 298

Ser Asp Gly Ser Asn Ala Ala Ala Asn Glu Phe Asp Leu Ile Ala Leu	
1 5 10 15	



Thr Ala Arg Leu Gly Cys Cys Asn Val Thr Pro Cys Trp Glu Lys Tyr  
20 25 30

Gly Asp Lys Cys Asn Glu Val Arg  
35 40

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<210> 299
<211> 148
<212> DNA
<213> Conus arenatus
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<220>
<221> CDS
<222> (1)..(117)
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<400> 299																	
tct	gat	ggc	agg	aat	gtc	gca	gca	aaa	gcg	ttt	cac	cgg	atc	ggc	cgg	48	
Ser	Asp	Gly	Arg	Asn	Val	Ala	Ala	Lys	Ala	Phe	His	Arg	Ile	Gly	Arg		
1				5					10					15			
acc	atc	agg	gat	gaa	tgc	tgt	tcc	aat	cct	gcc	tgt	agg	gtg	aat	aat	96	
Thr	Ile	Arg	Asp	Glu	Cys	Cys	Ser	Asn	Pro	Ala	Cys	Arg	Val	Asn	Asn		
			20					25					30				
cca	cac	gtt	tgt	aga	cga	cgc	tgatgctcca	ggaccctctg	aaccacgacg	t	148						
Pro	His	Val	Cys	Arg	Arg	Arg											
		35															

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<210> 300
<211> 39
<212> PRT
<213> Conus arenatus
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<400> 300
Ser Asp Gly Arg Asn Val Ala Ala Lys Ala Phe His Arg Ile Gly Arg
  1          5          10          15
Thr Ile Arg Asp Glu Cys Cys Ser Asn Pro Ala Cys Arg Val Asn Asn
          20          25          30
Pro His Val Cys Arg Arg Arg
      35

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<210> 301
<211> 151
<212> DNA
<213> Conus arenatus
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<220>  
<221> CDS  
<222> (1)..(120)
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<400> 301																
tct	gat	ggc	agg	aat	gcc	gca	gcc	aac	gcg	ttt	gac	ctg	atg	cct	ctg	48
Ser	Asp	Gly	Arg	Asn	Ala	Ala	Ala	Asn	Ala	Phe	Asp	Leu	Met	Pro	Leu	
1				5					10					15		
acc	gcc	agg	cta	aat	tgc	tgt	agc	att	ccc	ggc	tgt	tgg	aac	gaa	tat	96
Thr	Ala	Arg	Leu	Asn	Cys	Cys	Ser	Ile	Pro	Gly	Cys	Trp	Asn	Glu	Tyr	
			20					25					30			



aaa gac aga tgt agt aaa gta cgc tgatgctcca ggaccctctg aaccacgacg 150  
 Lys Asp Arg Cys Ser Lys Val Arg  
           35                  40

t 151

<210> 302  
 <211> 40  
 <212> PRT  
 <213> Conus arenatus

<400> 302  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Ala Phe Asp Leu Met Pro Leu  
   1                  5                  10                  15

Thr Ala Arg Leu Asn Cys Cys Ser Ile Pro Gly Cys Trp Asn Glu Tyr  
           20                  25                  30

Lys Asp Arg Cys Ser Lys Val Arg  
           35                  40

<210> 303  
 <211> 157  
 <212> DNA  
 <213> Conus aurisiacus

<220>  
 <221> CDS  
 <222> (52)..(126)

<400> 303  
 tctgatggca ggaatgccgc agccgacgac aaagcgtctg acctgggtcgc t ctg gtc 57  
   Leu Val  
   1

gtc agg gga gga tgc tgt tcc cac cct gtc tgt tac ttt aat aat cca 105  
 Val Arg Gly Gly Cys Cys Ser His Pro Val Cys Tyr Phe Asn Asn Pro  
           5                  10                  15

caa atg tgt cgt gga aga cgc tgatgctcca ggaccctctg aaccacgacg t 157  
 Gln Met Cys Arg Gly Arg Arg  
       20                  25

<210> 304  
 <211> 25  
 <212> PRT  
 <213> Conus aurisiacus

<400> 304  
 Leu Val Val Arg Gly Gly Cys Cys Ser His Pro Val Cys Tyr Phe Asn  
   1                  5                  10                  15

Asn Pro Gln Met Cys Arg Gly Arg Arg  
           20                  25

<210> 305  
 <211> 157  
 <212> DNA  
 <213> Conus aurisiacus



&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (52)..(126)

&lt;400&gt; 305

tctgatggca ggaatgccgc agccgacgac aaagcgtctg acctggtcgc t ctg gcc 57  
 Leu Ala  
 1

gtc agg gga gga tgc tgt tcc cac cct gtc tgt aac ttg aat aat cca 105  
 Val Arg Gly Gly Cys Cys Ser His Pro Val Cys Asn Leu Asn Asn Pro  
 5 10 15

caa atg tgt cgt gga aga cgc tgatgctcca ggaccctctg aaccacgacg t 157  
 Gln Met Cys Arg Gly Arg Arg  
 20 25

&lt;210&gt; 306

&lt;211&gt; 25

&lt;212&gt; PRT

&lt;213&gt; Conus aurisiacus

&lt;400&gt; 306

Leu Ala Val Arg Gly Gly Cys Cys Ser His Pro Val Cys Asn Leu Asn  
 1 5 10 15

Asn Pro Gln Met Cys Arg Gly Arg Arg  
 20 25

&lt;210&gt; 307

&lt;211&gt; 157

&lt;212&gt; DNA

&lt;213&gt; Conus betulinus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(117)

&lt;400&gt; 307

ttt cgt ggc agg aat ccc gca gcc aac gac aaa agg tct gac ctg gcc 48  
 Phe Arg Gly Arg Asn Pro Ala Ala Asn Asp Lys Arg Ser Asp Leu Ala  
 1 5 10 15

gct ctg agc gtc agg gga gga tgc tgt tcc cat cct gcc tgt agc gtg 96  
 Ala Leu Ser Val Arg Gly Gly Cys Cys Ser His Pro Ala Cys Ser Val  
 20 25 30

act cat cca gag ctt tgt ggc tgaagacgct gatgccccag gaccctctga 147  
 Thr His Pro Glu Leu Cys Gly  
 35

accacgacgt 157

&lt;210&gt; 308

&lt;211&gt; 39

&lt;212&gt; PRT

&lt;213&gt; Conus betulinus

&lt;400&gt; 308

Phe Arg Gly Arg Asn Pro Ala Ala Asn Asp Lys Arg Ser Asp Leu Ala  
 1 5 10 15



Ala Leu Ser Val Arg Gly Gly Cys Cys Ser His Pro Ala Cys Ser Val  
                   20                  25                  30

Thr His Pro Glu Leu Cys Gly  
                   35

<210> 309  
 <211> 151  
 <212> DNA  
 <213> Conus betulinus

<220>  
 <221> CDS  
 <222> (1)..(120)

<400> 309  
 tct gat ggc ggg aat gcc gca gcc aaa gcg tct gac ctg atc gct cag 48  
 Ser Asp Gly Gly Asn Ala Ala Ala Lys Ala Ser Asp Leu Ile Ala Gln  
   1                  5                  10                  15  
 acc atc agg gga gga tgc tgt tcc tat cct gcc tgt agc gtg gaa cat 96  
 Thr Ile Arg Gly Gly Cys Cys Ser Tyr Pro Ala Cys Ser Val Glu His  
                   20                  25                  30  
 caa gac ctt tgt gat gga aga cgc tgatgctcca ggaccctctg aaccacgacg 150  
 Gln Asp Leu Cys Asp Gly Arg Arg  
                   35                  40  
 t 151

<210> 310  
 <211> 40  
 <212> PRT  
 <213> Conus betulinus

<400> 310  
 Ser Asp Gly Gly Asn Ala Ala Ala Lys Ala Ser Asp Leu Ile Ala Gln  
   1                  5                  10                  15  
 Thr Ile Arg Gly Gly Cys Cys Ser Tyr Pro Ala Cys Ser Val Glu His  
                   20                  25                  30  
 Gln Asp Leu Cys Asp Gly Arg Arg  
                   35                  40

<210> 311  
 <211> 114  
 <212> DNA  
 <213> Conus characteristicus

<220>  
 <221> CDS  
 <222> (1)..(111)

<400> 311  
 tct tat ggc agg aat gcc gca gcc aaa gcg ttt gaa gtg agt tgc tgt 48  
 Ser Tyr Gly Arg Asn Ala Ala Ala Lys Ala Phe Glu Val Ser Cys Cys  
   1                  5                  10                  15  
 gtc gtt cgc ccc tgt tgg att cgc tat caa gag gaa tgt ctt gaa gca 96  
 Val Val Arg Pro Cys Trp Ile Arg Tyr Gln Glu Glu Cys Leu Glu Ala



20 25 30 114  
 gat ccc agg acc ctc tga  
 Asp Pro Arg Thr Leu  
 35

<210> 312  
 <211> 37  
 <212> PRT  
 <213> Conus characteristicus

<400> 312  
 Ser Tyr Gly Arg Asn Ala Ala Ala Lys Ala Phe Glu Val Ser Cys Cys  
 1 5 10 15  
 Val Val Arg Pro Cys Trp Ile Arg Tyr Gln Glu Glu Cys Leu Glu Ala  
 20 25 30  
 Asp Pro Arg Thr Leu  
 35

<210> 313  
 <211> 123  
 <212> DNA  
 <213> Conus characteristicus

<220>  
 <221> CDS  
 <222> (1)..(120)

<400> 313  
 tct gat ggc agg aat gcc gca gcc aac gcc ctt gac ctg atc act ctg 48  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Ala Leu Asp Leu Ile Thr Leu  
 1 5 10 15  
 atc gcc agg caa aat tgc tgt agc att ccc ggc tgt tgg gag aaa tat 96  
 Ile Ala Arg Gln Asn Cys Cys Ser Ile Pro Gly Cys Trp Glu Lys Tyr  
 20 25 30  
 gga gac aaa tgt agt gaa gta cgc tga 123  
 Gly Asp Lys Cys Ser Glu Val Arg  
 35 40

<210> 314  
 <211> 40  
 <212> PRT  
 <213> Conus characteristicus

<400> 314  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Ala Leu Asp Leu Ile Thr Leu  
 1 5 10 15  
 Ile Ala Arg Gln Asn Cys Cys Ser Ile Pro Gly Cys Trp Glu Lys Tyr  
 20 25 30  
 Gly Asp Lys Cys Ser Glu Val Arg  
 35 40

<210> 315  
 <211> 154



<212> DNA  
<213> Conus catus

<220>  
<221> CDS  
<222> (1)..(123)

<400> 315  
tct gat ggc agg aat gaa gca gcc aac gac gaa gcg tct gac gtg atc 48  
Ser Asp Gly Arg Asn Glu Ala Ala Asn Asp Glu Ala Ser Asp Val Ile  
1 5 10 15  
  
gag ctg gcc ctc aag gga tgc tgt tcc aac cct gtc tgt cac ttg gag 96  
Glu Leu Ala Leu Lys Gly Cys Cys Ser Asn Pro Val Cys His Leu Glu  
20 25 30  
  
cat cca aac gct tgt ggt aga aga cgc tgatgctcca ggaccctctg 143  
His Pro Asn Ala Cys Gly Arg Arg Arg  
35 40  
  
aaccacgacg t 154

<210> 316  
<211> 41  
<212> PRT  
<213> Conus catus

<400> 316  
Ser Asp Gly Arg Asn Glu Ala Ala Asn Asp Glu Ala Ser Asp Val Ile  
1 5 10 15  
  
Glu Leu Ala Leu Lys Gly Cys Cys Ser Asn Pro Val Cys His Leu Glu  
20 25 30  
  
His Pro Asn Ala Cys Gly Arg Arg Arg  
35 40

<210> 317  
<211> 154  
<212> DNA  
<213> Conus catus

<220>  
<221> CDS  
<222> (1)..(123)

<400> 317  
tct gat ggc agg aat gcc gca gcc aac gac aaa gcg tct gac ctg gtc 48  
Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Ala Ser Asp Leu Val  
1 5 10 15  
  
gct ctg gcc gtc agg gga tgc tgt tcc aac cct atc tgt tac ttt aat 96  
Ala Leu Ala Val Arg Gly Cys Cys Ser Asn Pro Ile Cys Tyr Phe Asn  
20 25 30  
  
aat cca cga att tgt cgt gga aga cgc tgatgctcca ggaccctctg 143  
Asn Pro Arg Ile Cys Arg Gly Arg Arg  
35 40  
  
aaccacgacg t 154



<210> 318  
 <211> 41  
 <212> PRT  
 <213> Conus catus

<400> 318  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Ala Ser Asp Leu Val  
           1                  5                  10                  15  
 Ala Leu Ala Val Arg Gly Cys Cys Ser Asn Pro Ile Cys Tyr Phe Asn  
                   20                  25                  30  
 Asn Pro Arg Ile Cys Arg Gly Arg Arg  
                   35                  40

<210> 319  
 <211> 111  
 <212> DNA  
 <213> Conus episcopatus

<220>  
 <221> CDS  
 <222> (1)..(108)

<400> 319  
 tct cat ggc agg aat gcc gca cgc aaa gcg tct gac ctg atc gct ctg 48  
 Ser His Gly Arg Asn Ala Ala Arg Lys Ala Ser Asp Leu Ile Ala Leu  
           1                  5                  10                  15  
 acc gtc agg gaa tgc tgt tct cag cct ccc tgt cgc tgg aaa cat cca 96  
 Thr Val Arg Glu Cys Cys Ser Gln Pro Pro Cys Arg Trp Lys His Pro  
                   20                  25                  30  
 gaa ctt tgt agt tga 111  
 Glu Leu Cys Ser  
                   35

<210> 320  
 <211> 36  
 <212> PRT  
 <213> Conus episcopatus

<400> 320  
 Ser His Gly Arg Asn Ala Ala Arg Lys Ala Ser Asp Leu Ile Ala Leu  
           1                  5                  10                  15  
 Thr Val Arg Glu Cys Cys Ser Gln Pro Pro Cys Arg Trp Lys His Pro  
                   20                  25                  30  
 Glu Leu Cys Ser  
                   35

<210> 321  
 <211> 151  
 <212> DNA  
 <213> Conus geographus

<220>  
 <221> CDS  
 <222> (1)..(120)



<400> 321  
 tct gat ggc agg aat gac gca gcc aaa gcg ttt gac ctg ata tct tcg 48  
 Ser Asp Gly Arg Asn Asp Ala Ala Lys Ala Phe Asp Leu Ile Ser Ser  
 1 5 10 15  
 acc gtc aag aaa gga tgc tgt tcc cat cct gcc tgt gcg ggg aat aat 96  
 Thr Val Lys Lys Gly Cys Cys Ser His Pro Ala Cys Ala Gly Asn Asn  
 20 25 30  
 caa cat att tgt ggc cga aga cgc tgatgctcca ggaccctctg aaccacgacg 150  
 Gln His Ile Cys Gly Arg Arg Arg  
 35 40  
 t 151

<210> 322  
 <211> 40  
 <212> PRT  
 <213> Conus geographus

<400> 322  
 Ser Asp Gly Arg Asn Asp Ala Ala Lys Ala Phe Asp Leu Ile Ser Ser  
 1 5 10 15  
 Thr Val Lys Lys Gly Cys Cys Ser His Pro Ala Cys Ala Gly Asn Asn  
 20 25 30  
 Gln His Ile Cys Gly Arg Arg Arg  
 35 40

<210> 323  
 <211> 154  
 <212> DNA  
 <213> Conus geographus

<220>  
 <221> CDS  
 <222> (1)..(123)

<400> 323  
 tct gat ggc agg aat gcc gca gcc aac gac caa gcg tct gac ctg atg 48  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Gln Ala Ser Asp Leu Met  
 1 5 10 15  
 gct gcg acc gtc agg gga tgc tgt gcc gtt cct tcc tgt cgc ctc cgt 96  
 Ala Ala Thr Val Arg Gly Cys Cys Ala Val Pro Ser Cys Arg Leu Arg  
 20 25 30  
 aat cca gac ctt tgt ggt gga gga cgc tgatgctcca ggaccctctg 143  
 Asn Pro Asp Leu Cys Gly Gly Gly Arg  
 35 40  
 aaccacgacg t 154

<210> 324  
 <211> 41  
 <212> PRT  
 <213> Conus geographus

<400> 324  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Gln Ala Ser Asp Leu Met

cont.



## 115

1                      5                      10                      15  
 Ala Ala Thr Val Arg Gly Cys Cys Ala Val Pro Ser Cys Arg Leu Arg  
                          20                                      25                                      30  
 Asn Pro Asp Leu Cys Gly Gly Gly Arg  
                          35                                      40

<210> 325  
 <211> 120  
 <212> DNA  
 <213> Conus imperialis

<220>  
 <221> CDS  
 <222> (1)..(117)

<400> 325  
 ctt gat gaa agg aat gcc gca gcc gac gac aaa gcg tct gac ctg atc      48  
 Leu Asp Glu Arg Asn Ala Ala Ala Asp Asp Lys Ala Ser Asp Leu Ile  
   1                                      5                                      10                                      15  
 gct caa atc gtc agg aga gga tgc tgt tcc cat cct gcc tgt aac gtg      96  
 Ala Gln Ile Val Arg Arg Gly Cys Cys Ser His Pro Ala Cys Asn Val  
                          20                                      25                                      30  
 aat aat cca cac att tgt ggt tga      120  
 Asn Asn Pro His Ile Cys Gly  
                          35

<210> 326  
 <211> 39  
 <212> PRT  
 <213> Conus imperialis

<400> 326  
 Leu Asp Glu Arg Asn Ala Ala Ala Asp Asp Lys Ala Ser Asp Leu Ile  
   1                                      5                                      10                                      15  
 Ala Gln Ile Val Arg Arg Gly Cys Cys Ser His Pro Ala Cys Asn Val  
                          20                                      25                                      30  
 Asn Asn Pro His Ile Cys Gly  
                          35

<210> 327  
 <211> 142  
 <212> DNA  
 <213> Conus lividus

<220>  
 <221> CDS  
 <222> (1)..(111)

<400> 327  
 tct gat ggc agg aat act gca gcc aaa gtc aaa tat tct aag acg ccg      48  
 Ser Asp Gly Arg Asn Thr Ala Ala Lys Val Lys Tyr Ser Lys Thr Pro  
   1                                      5                                      10                                      15  
 gag gaa tgc tgt ccc aat cct ccc tgt ttc gcg aca aat tcg gat att      96  
 Glu Glu Cys Cys Pro Asn Pro Pro Cys Phe Ala Thr Asn Ser Asp Ile



20 25 30  
 tgt ggc gga aga cgc tgatgctcca ggaccctctg aaccacgacg t 142  
 Cys Gly Gly Arg Arg  
 35

<210> 328  
 <211> 37  
 <212> PRT  
 <213> Conus lividus

<400> 328  
 Ser Asp Gly Arg Asn Thr Ala Ala Lys Val Lys Tyr Ser Lys Thr Pro  
 1 5 10 15  
 Glu Glu Cys Cys Pro Asn Pro Pro Cys Phe Ala Thr Asn Ser Asp Ile  
 20 25 30  
 Cys Gly Gly Arg Arg  
 35

<210> 329  
 <211> 157  
 <212> DNA  
 <213> Conus lividus

<220>  
 <221> CDS  
 <222> (1)..(117)

<400> 329  
 tct aat ggc agg aat gcc gca gcc aaa ttc aaa gcg cct gcc ctg atg 48  
 Ser Asn Gly Arg Asn Ala Ala Ala Lys Phe Lys Ala Pro Ala Leu Met  
 1 5 10 15  
 aag cgg acc gtc agg gat gct tgc tgt tca gac cct cgc tgt tcc ggg 96  
 Lys Arg Thr Val Arg Asp Ala Cys Cys Ser Asp Pro Arg Cys Ser Gly  
 20 25 30  
 aaa cat caa gac ctg tgt ggc tgaagacgct gatgctccag gaccctctga 147  
 Lys His Gln Asp Leu Cys Gly  
 35  
 accacgacgt 157

<210> 330  
 <211> 39  
 <212> PRT  
 <213> Conus lividus

<400> 330  
 Ser Asn Gly Arg Asn Ala Ala Ala Lys Phe Lys Ala Pro Ala Leu Met  
 1 5 10 15  
 Lys Arg Thr Val Arg Asp Ala Cys Cys Ser Asp Pro Arg Cys Ser Gly  
 20 25 30  
 Lys His Gln Asp Leu Cys Gly  
 35



<210> 331  
 <211> 157  
 <212> DNA  
 <213> Conus lividus

<220>  
 <221> CDS  
 <222> (1)..(117)

<400> 331  
 tct aat ggc agg aat gcc gca gcc aaa ttc aaa gcg cct gcc ctg atg 48  
 Ser Asn Gly Arg Asn Ala Ala Ala Lys Phe Lys Ala Pro Ala Leu Met  
 1 5 10 15  
 gag ctg acc gtc agg gaa gat tgc tgt tca gac cct cgc tgt tcc gtg 96  
 Glu Leu Thr Val Arg Glu Asp Cys Cys Ser Asp Pro Arg Cys Ser Val  
 20 25 30  
 gga cat caa gac ctg tgt gcc tgaagacgct gatgctccag gaccctctga 147  
 Gly His Gln Asp Leu Cys Gly  
 35  
 accacgacgt 157

<210> 332  
 <211> 39  
 <212> PRT  
 <213> Conus lividus

<400> 332  
 Ser Asn Gly Arg Asn Ala Ala Ala Lys Phe Lys Ala Pro Ala Leu Met  
 1 5 10 15  
 Glu Leu Thr Val Arg Glu Asp Cys Cys Ser Asp Pro Arg Cys Ser Val  
 20 25 30  
 Gly His Gln Asp Leu Cys Gly  
 35

<210> 333  
 <211> 157  
 <212> DNA  
 <213> Conus lividus

<220>  
 <221> CDS  
 <222> (1)..(126)

<400> 333  
 gca ttt gat ggc agg aat gct gca gcc agc gac aaa gcg tcc gag ctg 48  
 Ala Phe Asp Gly Arg Asn Ala Ala Ala Ser Asp Lys Ala Ser Glu Leu  
 1 5 10 15  
 atg gct ctg gcc gtc agg gga tgc tgt tcc cat cct gcc tgt gct ggg 96  
 Met Ala Leu Ala Val Arg Gly Cys Cys Ser His Pro Ala Cys Ala Gly  
 20 25 30  
 agt aat gca cat atc tgt gcc aga aga cgc tgatgctcca ggaccctctg 146  
 Ser Asn Ala His Ile Cys Gly Arg Arg Arg  
 35 40  
 aaccacgacg t 157



<210> 334  
 <211> 42  
 <212> PRT  
 <213> Conus lividus

<400> 334  
 Ala Phe Asp Gly Arg Asn Ala Ala Ala Ser Asp Lys Ala Ser Glu Leu  
   1                  5                  10                  15  
 Met Ala Leu Ala Val Arg Gly Cys Cys Ser His Pro Ala Cys Ala Gly  
                   20                  25                  30  
 Ser Asn Ala His Ile Cys Gly Arg Arg Arg  
           35                  40

<210> 335  
 <211> 157  
 <212> DNA  
 <213> Conus lividus

<220>  
 <221> CDS  
 <222> (1)..(117)

<400> 335  
 tct aat ggc agg aat gcc gca gcc aaa ttc aaa gcg cct gcc ctg atg 48  
 Ser Asn Gly Arg Asn Ala Ala Ala Lys Phe Lys Ala Pro Ala Leu Met  
   1                  5                  10                  15  
 aag ctg acc gtc agg gag gat tgc tgt tca gac cct cgc tgt tcc gtg 96  
 Lys Leu Thr Val Arg Glu Asp Cys Cys Ser Asp Pro Arg Cys Ser Val  
                   20                  25                  30  
 gga cat caa gac atg tgt gcc tgaagacgct gatgctccag gaccctctga 147  
 Gly His Gln Asp Met Cys Gly  
           35  
 atcacgacgt 157

<210> 336  
 <211> 39  
 <212> PRT  
 <213> Conus lividus

<400> 336  
 Ser Asn Gly Arg Asn Ala Ala Ala Lys Phe Lys Ala Pro Ala Leu Met  
   1                  5                  10                  15  
 Lys Leu Thr Val Arg Glu Asp Cys Cys Ser Asp Pro Arg Cys Ser Val  
                   20                  25                  30  
 Gly His Gln Asp Met Cys Gly  
           35

<210> 337  
 <211> 154  
 <212> DNA  
 <213> Conus lividus

<220>



&lt;221&gt; CDS

&lt;222&gt; (1)..(114)

&lt;400&gt; 337

ttt	gaa	tgc	agg	aat	gct	gca	ggc	aac	gac	aaa	gcg	act	gac	ctg	atg	48
Phe	Glu	Cys	Arg	Asn	Ala	Ala	Gly	Asn	Asp	Lys	Ala	Thr	Asp	Leu	Met	
1				5					10					15		

gct	ctg	act	gtc	agg	gga	tgc	tgt	tcc	cat	cct	gcc	tgt	gct	ggg	aat	96
Ala	Leu	Thr	Val	Arg	Gly	Cys	Cys	Ser	His	Pro	Ala	Cys	Ala	Gly	Asn	
			20					25					30			

aat	cca	cat	atc	tgc	ggc	tgaagacgct	gatgctccag	gaccctctga	144
Asn	Pro	His	Ile	Cys	Gly				
		35							

accacgacgt	154
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&lt;210&gt; 338

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; Conus lividus

&lt;400&gt; 338

Phe	Glu	Cys	Arg	Asn	Ala	Ala	Gly	Asn	Asp	Lys	Ala	Thr	Asp	Leu	Met
1				5					10					15	

Ala	Leu	Thr	Val	Arg	Gly	Cys	Cys	Ser	His	Pro	Ala	Cys	Ala	Gly	Asn
			20					25					30		

Asn	Pro	His	Ile	Cys	Gly
		35			

&lt;210&gt; 339

&lt;211&gt; 154

&lt;212&gt; DNA

&lt;213&gt; Conus lividus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(114)

&lt;400&gt; 339

ttt	gat	ggc	agg	aac	gcc	gca	gcc	aac	aac	aaa	gcg	act	gat	ctg	atg	48
Phe	Asp	Gly	Arg	Asn	Ala	Ala	Ala	Asn	Asn	Lys	Ala	Thr	Asp	Leu	Met	
1				5					10					15		

gct	ctg	act	gtc	aga	gga	tgc	tgt	ggc	aat	cct	tca	tgt	agc	atc	cat	96
Ala	Leu	Thr	Val	Arg	Gly	Cys	Cys	Gly	Asn	Pro	Ser	Cys	Ser	Ile	His	
			20					25					30			

att	cct	tac	gtt	tgt	aat	tagagacact	gatgctccag	gaccctctga	144
Ile	Pro	Tyr	Val	Cys	Asn				
		35							

accacgacgt	154
------------	-----

&lt;210&gt; 340

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; Conus lividus



&lt;400&gt; 340

Phe Asp Gly Arg Asn Ala Ala Ala Asn Asn Lys Ala Thr Asp Leu Met  
 1 5 10 15

Ala Leu Thr Val Arg Gly Cys Cys Gly Asn Pro Ser Cys Ser Ile His  
 20 25 30

Ile Pro Tyr Val Cys Asn  
 35

&lt;210&gt; 341

&lt;211&gt; 157

&lt;212&gt; DNA

&lt;213&gt; Conus lividus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(126)

&lt;400&gt; 341

tct aat ggc agg aat gcc gca gcc aaa ttc aaa gcg cct gcc ctg atg 48  
 Ser Asn Gly Arg Asn Ala Ala Ala Lys Phe Lys Ala Pro Ala Leu Met  
 1 5 10 15

aag cgg acc gac agc gaa gaa tgc tgt tta gac tct cgc tgt gcc ggg 96  
 Lys Arg Thr Asp Ser Glu Glu Cys Cys Leu Asp Ser Arg Cys Ala Gly  
 20 25 30

caa cat caa gac ctg tgt ggc gga aga cgc tgatgctcca ggaccctctg 146  
 Gln His Gln Asp Leu Cys Gly Gly Arg Arg  
 35 40

aaccacgacg t 157

&lt;210&gt; 342

&lt;211&gt; 42

&lt;212&gt; PRT

&lt;213&gt; Conus lividus

&lt;400&gt; 342

Ser Asn Gly Arg Asn Ala Ala Ala Lys Phe Lys Ala Pro Ala Leu Met  
 1 5 10 15

Lys Arg Thr Asp Ser Glu Glu Cys Cys Leu Asp Ser Arg Cys Ala Gly  
 20 25 30

Gln His Gln Asp Leu Cys Gly Gly Arg Arg  
 35 40

&lt;210&gt; 343

&lt;211&gt; 126

&lt;212&gt; DNA

&lt;213&gt; Conus marmoreus

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(123)

&lt;400&gt; 343

tct gat ggc agg aat gcc gca gcc aag gac aaa gcg tct gac ctg gtc 48  
 Ser Asp Gly Arg Asn Ala Ala Ala Lys Asp Lys Ala Ser Asp Leu Val



## 121

1	5	10	15	
gct ctg acc gtc aag gga tgc tgt tct aat cct ccc tgt tac gcg aat				96
Ala Leu Thr Val Lys Gly Cys Cys Ser Asn Pro Pro Cys Tyr Ala Asn	20	25	30	
aat caa gcc tat tgt aat gga aga cgc tga				126
Asn Gln Ala Tyr Cys Asn Gly Arg Arg	35	40		
<210> 344				
<211> 41				
<212> PRT				
<213> Conus marmoreus				
<400> 344				
Ser Asp Gly Arg Asn Ala Ala Ala Lys Asp Lys Ala Ser Asp Leu Val		10	15	
1	5			
Ala Leu Thr Val Lys Gly Cys Cys Ser Asn Pro Pro Cys Tyr Ala Asn	20	25	30	
Asn Gln Ala Tyr Cys Asn Gly Arg Arg	35	40		
<210> 345				
<211> 117				
<212> DNA				
<213> Conus marmoreus				
<220>				
<221> CDS				
<222> (1)..(114)				
<400> 345				
tct gat ggc agg aat gcc gca gcc aag gac aaa gcg tct gac ctg gtc				48
Ser Asp Gly Arg Asn Ala Ala Ala Lys Asp Lys Ala Ser Asp Leu Val	5	10	15	
1				
gct ctg acc gtc aag gga tgc tgt tct cat cct gcc tgt agc gtg aat				96
Ala Leu Thr Val Lys Gly Cys Cys Ser His Pro Ala Cys Ser Val Asn	20	25	30	
aat cca gac att tgt ggt tga				117
Asn Pro Asp Ile Cys Gly	35			
<210> 346				
<211> 38				
<212> PRT				
<213> Conus marmoreus				
<400> 346				
Ser Asp Gly Arg Asn Ala Ala Ala Lys Asp Lys Ala Ser Asp Leu Val		10	15	
1	5			
Ala Leu Thr Val Lys Gly Cys Cys Ser His Pro Ala Cys Ser Val Asn	20	25	30	
Asn Pro Asp Ile Cys Gly	35			



<210> 347  
 <211> 145  
 <212> DNA  
 <213> Conus musicus

<220>  
 <221> CDS  
 <222> (1)..(114)

<400> 347  
 tct gat ggc agg aat gct gca gcc aac aac aaa gtg gct ttg acc atg 48  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Asn Lys Val Ala Leu Thr Met  
 1 5 10 15  
 agg gga aaa tgc tgt atc aat gat gcg tgt cgc tcg aaa cat cca cag 96  
 Arg Gly Lys Cys Cys Ile Asn Asp Ala Cys Arg Ser Lys His Pro Gln  
 20 25 30  
 tac tgt tct gga aga cgc tgatactcca ggaccctctg aaccacgacg t 145  
 Tyr Cys Ser Gly Arg Arg  
 35

<210> 348  
 <211> 38  
 <212> PRT  
 <213> Conus musicus

<400> 348  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Asn Lys Val Ala Leu Thr Met  
 1 5 10 15  
 Arg Gly Lys Cys Cys Ile Asn Asp Ala Cys Arg Ser Lys His Pro Gln  
 20 25 30  
 Tyr Cys Ser Gly Arg Arg  
 35

<210> 349  
 <211> 154  
 <212> DNA  
 <213> Conus musicus

<220>  
 <221> CDS  
 <222> (1)..(123)

<400> 349  
 tct gat ggc agg aat gct gca gcc aac gac aaa gtg tct gac cag atg 48  
 Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Val Ser Asp Gln Met  
 1 5 10 15  
 gct ctg gtt gtc agg gga tgc tgt tac aat att gcc tgt aga att aat 96  
 Ala Leu Val Val Arg Gly Cys Cys Tyr Asn Ile Ala Cys Arg Ile Asn  
 20 25 30  
 aat cca cgg tac tgt cgt gga aaa cgc tgatgttcca ggaccctctg 143  
 Asn Pro Arg Tyr Cys Arg Gly Lys Arg  
 35 40  
 aaccacgacg t 154



```
<210> 350
<211> 41
<212> PRT
<213> Conus musicus
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```

<400> 350
Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Val Ser Asp Gln Met
  1          5          10          15
Ala Leu Val Val Arg Gly Cys Cys Tyr Asn Ile Ala Cys Arg Ile Asn
      20          25          30
Asn Pro Arg Tyr Cys Arg Gly Lys Arg
      35          40

```

```
<210> 351
<211> 154
<212> DNA
<213> Conus obscurus
```

<220>  
<221> CDS  
<222> (52) .. (123)

```

<400> 351
tctgaaggca ggaatgccgc agccaacgac aaagcgtctg acctgatggc t ctg aac 57
                                                    Leu Asn
                                                    1

gtc agg gga tgc tgt tcc cat cct gtc tgt cgc ttc aat tat cca aaa 105
Val Arg Gly Cys Cys Ser His Pro Val Cys Arg Phe Asn Tyr Pro Lys
           5                                10                    15

tat tgt ggt gga aga cgc tgatgggtcca ggaccctctg aaccacgacg t 154
Tyr Cys Gly Gly Arg Arg
           20

```

```
<210> 352
<211> 24
<212> PRT
<213> Conus obscurus
```

```
<400> 352
Leu Asn Val Arg Gly Cys Cys Ser His Pro Val Cys Arg Phe Asn Tyr
  1             5             10             15
Pro Lys Tyr Cys Gly Gly Arg Arg
          20
```

```
<210> 353
<211> 151
<212> DNA
<213> Conus obscurus
```

```
<220>
<221> CDS
<222> (46) .. (111)
```

<400> 353  
tctgatggcg ggaatgccgc agcaaaagcg tttgatctaa tcact ctg gcc ctc agg 57  
Leu Ala Leu Arg



1

gat gaa tgc tgt gcc agt cct ccc tgt cgt ttg aat aat cca tac gta 105  
 Asp Glu Cys Cys Ala Ser Pro Pro Cys Arg Leu Asn Asn Pro Tyr Val  
     5                    10                    15                    20

tgt cat tgacgacgct gatgctccag gaccctctga accacgacgt 151  
 Cys His

<210> 354  
 <211> 22  
 <212> PRT  
 <213> Conus obscurus

<400> 354  
 Leu Ala Leu Arg Asp Glu Cys Cys Ala Ser Pro Pro Cys Arg Leu Asn  
     1                    5                    10                    15  
 Asn Pro Tyr Val Cys His  
                     20

<210> 355  
 <211> 217  
 <212> DNA  
 <213> Conus obscurus

<220>  
 <221> CDS  
 <222> (1)..(186)

<400> 355  
 atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
     1                    5                    10                    15

ccc act tca gat cgt gca tct gat agg agg aat gcc gca gcc aaa gcg 96  
 Pro Thr Ser Asp Arg Ala Ser Asp Arg Arg Asn Ala Ala Ala Lys Ala  
                     20                    25                    30

ttt gac ctg aga tat tcg acc gcc aag aga gga tgc tgt tcc aat cct 144  
 Phe Asp Leu Arg Tyr Ser Thr Ala Lys Arg Gly Cys Cys Ser Asn Pro  
             35                    40                    45

gtc tgt tgg cag aat aat gca gaa tac tgt cgt gaa agt ggc 186  
 Val Cys Trp Gln Asn Asn Ala Glu Tyr Cys Arg Glu Ser Gly  
     50                    55                    60

taatgctcca ggaccctctg aaccacgacg t 217

<210> 356  
 <211> 62  
 <212> PRT  
 <213> Conus obscurus

<400> 356  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
     1                    5                    10                    15  
 Pro Thr Ser Asp Arg Ala Ser Asp Arg Arg Asn Ala Ala Ala Lys Ala  
                     20                    25                    30



## 125

Phe Asp Leu Arg Tyr Ser Thr Ala Lys Arg Gly Cys Cys Ser Asn Pro  
                   35                                  40                                  45

Val Cys Trp Gln Asn Asn Ala Glu Tyr Cys Arg Glu Ser Gly  
           50                                  55                                  60

<210> 357

<211> 208

<212> DNA

<213> Conus obscurus

<220>

<221> CDS

<222> (1)..(168)

<400> 357

atg ttc acc gtg ttt ctg ttg gtt gtc ttg gca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
       1                                  5                                  10                                  15

ttc act tca gat cgt gca tct gat ggc ggg aat gtc gca gcg tct cac 96  
 Phe Thr Ser Asp Arg Ala Ser Asp Gly Gly Asn Val Ala Ala Ser His  
                   20                                  25                                  30

ctg atc gct ctg acc atc aag gga tgc tgt tct cac cct ccc tgt gcc 144  
 Leu Ile Ala Leu Thr Ile Lys Gly Cys Cys Ser His Pro Pro Cys Ala  
                   35                                  40                                  45

cag aat aat caa gac tat tgt ggt tgacgacgct gatgctccag gaccctctga 198  
 Gln Asn Asn Gln Asp Tyr Cys Gly  
           50                                  55

accacgacgt 208

<210> 358

<211> 56

<212> PRT

<213> Conus obscurus

<400> 358

Met Phe Thr Val Phe Leu Leu Val Val Leu Ala Thr Thr Val Val Ser  
       1                                  5                                  10                                  15

Phe Thr Ser Asp Arg Ala Ser Asp Gly Gly Asn Val Ala Ala Ser His  
                   20                                  25                                  30

Leu Ile Ala Leu Thr Ile Lys Gly Cys Cys Ser His Pro Pro Cys Ala  
                   35                                  40                                  45

Gln Asn Asn Gln Asp Tyr Cys Gly  
           50                                  55

<210> 359

<211> 217

<212> DNA

<213> Conus obscurus

<220>

<221> CDS

<222> (1)..(186)



<400> 359  
 atg ttc acc gtg ttt ctg ttg gtt gtc tta tca acc acc gtc gtt tcc 48  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ser Thr Thr Val Val Ser  
 1 5 10 15  
 tcc act tca gat cgt gca tct gat agg agg aat gcc gca gcc aaa gcg 96  
 Ser Thr Ser Asp Arg Ala Ser Asp Arg Arg Asn Ala Ala Ala Lys Ala  
 20 25 30  
 tct gac ctg atg tat tcg acc gtc aag aaa gga tgt tgt tcc cat cct 144  
 Ser Asp Leu Met Tyr Ser Thr Val Lys Lys Gly Cys Cys Ser His Pro  
 35 40 45  
 gcc tgt tcg ggg aat aat cga gaa tat tgt cgt gaa agt ggc 186  
 Ala Cys Ser Gly Asn Asn Arg Glu Tyr Cys Arg Glu Ser Gly  
 50 55 60  
 taatgctcca ggaccctctg aaccacgacg t 217

<210> 360  
 <211> 62  
 <212> PRT  
 <213> Conus obscurus

<400> 360  
 Met Phe Thr Val Phe Leu Leu Val Val Leu Ser Thr Thr Val Val Ser  
 1 5 10 15  
 Ser Thr Ser Asp Arg Ala Ser Asp Arg Arg Asn Ala Ala Ala Lys Ala  
 20 25 30  
 Ser Asp Leu Met Tyr Ser Thr Val Lys Lys Gly Cys Cys Ser His Pro  
 35 40 45  
 Ala Cys Ser Gly Asn Asn Arg Glu Tyr Cys Arg Glu Ser Gly  
 50 55 60

<210> 361  
 <211> 157  
 <212> DNA  
 <213> Conus omaria

<220>  
 <221> CDS  
 <222> (52)..(126)

<400> 361  
 ttgatggca ggaatgcctc agccgacagc aaagtggctg cccggatcgc t cag atc 57  
 Gln Ile  
 1  
 gac agg gat cca tgc tgt tcc tat cct gac tgt ggc gcg aat cat cca 105  
 Asp Arg Asp Pro Cys Cys Ser Tyr Pro Asp Cys Gly Ala Asn His Pro  
 5 10 15  
 gag att tgt ggt gga aaa cgc tgatgctcca ggaccctctg aaccacgacg t 157  
 Glu Ile Cys Gly Gly Lys Arg  
 20 25

<210> 362  
 <211> 25



&lt;212&gt; PRT

&lt;213&gt; Conus omaria

&lt;400&gt; 362

Gln Ile Asp Arg Asp Pro Cys Cys Ser Tyr Pro Asp Cys Gly Ala Asn  
 1 5 10 15

His Pro Glu Ile Cys Gly Gly Lys Arg  
 20 25

&lt;210&gt; 363

&lt;211&gt; 128

&lt;212&gt; DNA

&lt;213&gt; Conus omaria

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (26)..(88)

&lt;400&gt; 363

tctcatggca ggaatgccgc acgct ctg acc gtc agg gaa tgc tgt tct cag 52  
 Leu Thr Val Arg Glu Cys Cys Ser Gln  
 1 5

cct cct tgt cgc tgg aaa cat cca gaa ctt tgt agt tgaagacgct 98  
 Pro Pro Cys Arg Trp Lys His Pro Glu Leu Cys Ser  
 10 15 20

gatgctccag gaccctctga accacgacgt 128

&lt;210&gt; 364

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Conus omaria

&lt;400&gt; 364

Leu Thr Val Arg Glu Cys Cys Ser Gln Pro Pro Cys Arg Trp Lys His  
 1 5 10 15

Pro Glu Leu Cys Ser  
 20

&lt;210&gt; 365

&lt;211&gt; 154

&lt;212&gt; DNA

&lt;213&gt; Conus omaria

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (52)..(123)

&lt;400&gt; 365

tttgatggca ggaatgctgc agccagcgac aaagcgtctg agctgatggc t ctg gcc 57  
 Leu Ala  
 1

gtc agg gga tgc tgt tcc cat cct gcc tgt gct ggg aat aat cca cat 105  
 Val Arg Gly Cys Cys Ser His Pro Ala Cys Ala Gly Asn Asn Pro His  
 5 10 15

atc tgt ggc aga aga cgc tgatgctcca ggaccctctg aaccacgacg t 154



Ile Cys Gly Arg Arg Arg  
20

<210> 366  
<211> 24  
<212> PRT  
<213> Conus omaria

<400> 366  
Leu Ala Val Arg Gly Cys Cys Ser His Pro Ala Cys Ala Gly Asn Asn  
1 5 10 15

Pro His Ile Cys Gly Arg Arg Arg  
20

<210> 367  
<211> 142  
<212> DNA  
<213> Conus omaria

<220>  
<221> CDS  
<222> (40)..(102)

<400> 367  
tctggtgtca ggaaagacgc agcgcttggc ctgatcgct ctg acc atc aag gga 54  
Leu Thr Ile Lys Gly  
1 5

tgc tgt tct gat cct agc tgt aac gtg aat aat cca gac tat tgt ggt 102  
Cys Cys Ser Asp Pro Ser Cys Asn Val Asn Asn Pro Asp Tyr Cys Gly  
10 15 20

tgacgacgct gatgctccag gaccctctga accacgacgt 142

<210> 368  
<211> 21  
<212> PRT  
<213> Conus omaria

<400> 368  
Leu Thr Ile Lys Gly Cys Cys Ser Asp Pro Ser Cys Asn Val Asn Asn  
1 5 10 15

Pro Asp Tyr Cys Gly  
20

<210> 369  
<211> 157  
<212> DNA  
<213> Conus omaria

<220>  
<221> CDS  
<222> (52)..(117)

<400> 369  
tctaattggca ggaatgccgc agccaaattc aaagcgctg ccctgatgga g ctg acc 57  
Leu Thr  
1



## 129

gtc agg gaa gaa tgc tgt tca gac cct cgc tgt tcc gtg gga cat caa 105  
 Val Arg Glu Glu Cys Cys Ser Asp Pro Arg Cys Ser Val Gly His Gln  
           5                          10                          15

gat atg tgt cgg tgaagcacgt gatgctccag gaccctctga accacgacgt 157  
 Asp Met Cys Arg  
           20

<210> 370  
 <211> 22  
 <212> PRT  
 <213> Conus omaria

<400> 370  
 Leu Thr Val Arg Glu Glu Cys Cys Ser Asp Pro Arg Cys Ser Val Gly  
       1                          5                          10                          15  
 His Gln Asp Met Cys Arg  
           20

<210> 371  
 <211> 151  
 <212> DNA  
 <213> Conus purpurascens

<220>  
 <221> CDS  
 <222> (1)..(120)

<400> 371  
 act gat ggc agg aat gct gca gcc ata gcg ctt gac ctg atc gct ccg 48  
 Thr Asp Gly Arg Asn Ala Ala Ala Ile Ala Leu Asp Leu Ile Ala Pro  
       1                          5                          10                          15

gcc gtc agg gga gga tgc tgt tcc aat cct gcc tgt tta gtg aat cat 96  
 Ala Val Arg Gly Gly Cys Cys Ser Asn Pro Ala Cys Leu Val Asn His  
           20                          25                          30

cta gaa atg tgt ggt aaa aga cgc tgatgcccga ggaccctctg aaccacgacg 150  
 Leu Glu Met Cys Gly Lys Arg Arg  
           35                          40

t 151

<210> 372  
 <211> 40  
 <212> PRT  
 <213> Conus purpurascens

<400> 372  
 Thr Asp Gly Arg Asn Ala Ala Ala Ile Ala Leu Asp Leu Ile Ala Pro  
       1                          5                          10                          15  
 Ala Val Arg Gly Gly Cys Cys Ser Asn Pro Ala Cys Leu Val Asn His  
           20                          25                          30  
 Leu Glu Met Cys Gly Lys Arg Arg  
           35                          40

<210> 373



<211> 160  
 <212> DNA  
 <213> *Conus purpurascens*

<220>  
 <221> CDS  
 <222> (1)..(120)

<400> 373  
 tct gat ggc agg gat gcc gca gcc aac gac aaa gcg tct gac ctg atc 48  
 Ser Asp Gly Arg Asp Ala Ala Ala Asn Asp Lys Ala Ser Asp Leu Ile  
 1 5 10 15  
 gct ctg acc gcc agg aga gat cca tgc tgt ttc aat cct gcc tgt aac 96  
 Ala Leu Thr Ala Arg Arg Asp Pro Cys Cys Phe Asn Pro Ala Cys Asn  
 20 25 30  
 gtg aat aat cca cag att tgt ggt tgaagacgct gatgctccag gaccctctga 150  
 Val Asn Asn Pro Gln Ile Cys Gly  
 35 40  
 accacgacgt 160

<210> 374  
 <211> 40  
 <212> PRT  
 <213> *Conus purpurascens*

<400> 374  
 Ser Asp Gly Arg Asp Ala Ala Ala Asn Asp Lys Ala Ser Asp Leu Ile  
 1 5 10 15  
 Ala Leu Thr Ala Arg Arg Asp Pro Cys Cys Phe Asn Pro Ala Cys Asn  
 20 25 30  
 Val Asn Asn Pro Gln Ile Cys Gly  
 35 40

<210> 375  
 <211> 151  
 <212> DNA  
 <213> *Conus purpurascens*

<220>  
 <221> CDS  
 <222> (1)..(120)

<400> 375  
 tct gat ggc agg gat gct gag aaa aca ggc ttt gac acg acc att gtg 48  
 Ser Asp Gly Arg Asp Ala Glu Lys Thr Gly Phe Asp Thr Thr Ile Val  
 1 5 10 15  
 ccg gaa gac tgc tgt tcg gat cct tcc tgt tgg agg ctg cat agt tta 96  
 Pro Glu Asp Cys Cys Ser Asp Pro Ser Cys Trp Arg Leu His Ser Leu  
 20 25 30  
 gct tgt act gga att gta aac cgc tgatgctcca ggaccctctg aaccacgacg 150  
 Ala Cys Thr Gly Ile Val Asn Arg  
 35 40

t 151



<210> 376  
 <211> 40  
 <212> PRT  
 <213> Conus purpurascens

<400> 376  
 Ser Asp Gly Arg Asp Ala Glu Lys Thr Gly Phe Asp Thr Thr Ile Val  
           1                          5                          10                          15  
 Pro Glu Asp Cys Cys Ser Asp Pro Ser Cys Trp Arg Leu His Ser Leu  
                           20                          25                          30  
 Ala Cys Thr Gly Ile Val Asn Arg  
                           35                          40

<210> 377  
 <211> 142  
 <212> DNA  
 <213> Conus purpurascens

<220>  
 <221> CDS  
 <222> (1)..(111)

<400> 377  
 act gat ggc agg agt gct gca gcc ata gcg ttt gcc ctg atc gct ccg 48  
 Thr Asp Gly Arg Ser Ala Ala Ala Ile Ala Phe Ala Leu Ile Ala Pro  
           1                          5                          10                          15  
 acc gtc tgc tgt act aat cct gcc tgt ctc gtg aat aat ata cgc ttt 96  
 Thr Val Cys Cys Thr Asn Pro Ala Cys Leu Val Asn Asn Ile Arg Phe  
                           20                          25                          30  
 tgt ggt gga aga cgc tgatgccccca ggaccctctg aaccacgacg t 142  
 Cys Gly Gly Arg Arg  
                           35

<210> 378  
 <211> 37  
 <212> PRT  
 <213> Conus purpurascens

<400> 378  
 Thr Asp Gly Arg Ser Ala Ala Ala Ile Ala Phe Ala Leu Ile Ala Pro  
           1                          5                          10                          15  
 Thr Val Cys Cys Thr Asn Pro Ala Cys Leu Val Asn Asn Ile Arg Phe  
                           20                          25                          30  
 Cys Gly Gly Arg Arg  
                           35

<210> 379  
 <211> 157  
 <212> DNA  
 <213> Conus regius

<220>  
 <221> CDS  
 <222> (1)..(117)



<400> 379  
 tct gat gga aga aat gcc gca agc gac gcc aaa gcg ttt ccc cgg atc 48  
 Ser Asp Gly Arg Asn Ala Ala Ser Asp Ala Lys Ala Phe Pro Arg Ile  
 1 5 10 15

gct cca atc gtc agg gac gaa tgc tgt agc gat cct agg tgt cac ggg 96  
 Ala Pro Ile Val Arg Asp Glu Cys Cys Ser Asp Pro Arg Cys His Gly  
 20 25 30

aat aat cgg gac cac tgt gct tgaagacgct gctgctccag gaccctctga 147  
 Asn Asn Arg Asp His Cys Ala  
 35

accacgacgt 157

<210> 380  
 <211> 39  
 <212> PRT  
 <213> Conus regius

<400> 380  
 Ser Asp Gly Arg Asn Ala Ala Ser Asp Ala Lys Ala Phe Pro Arg Ile  
 1 5 10 15

Ala Pro Ile Val Arg Asp Glu Cys Cys Ser Asp Pro Arg Cys His Gly  
 20 25 30

Asn Asn Arg Asp His Cys Ala  
 35

<210> 381  
 <211> 156  
 <212> DNA  
 <213> Conus regius

<220>  
 <221> CDS  
 <222> (1)..(117)

<400> 381  
 tct gat ggc agg aat acc gcg gcc gac gaa aaa gcg tcc gac ctg atc 48  
 Ser Asp Gly Arg Asn Thr Ala Ala Asp Glu Lys Ala Ser Asp Leu Ile  
 1 5 10 15

tct caa act gtc aag aga gat tgc tgt tcc cat cct ctc tgt aga tta 96  
 Ser Gln Thr Val Lys Arg Asp Cys Cys Ser His Pro Leu Cys Arg Leu  
 20 25 30

ttt gtt cca gga ctt tgt att tgaagacgct gctgctccag gaccctctga 147  
 Phe Val Pro Gly Leu Cys Ile  
 35

accacgact 156

<210> 382  
 <211> 39  
 <212> PRT  
 <213> Conus regius

<400> 382  
 Ser Asp Gly Arg Asn Thr Ala Ala Asp Glu Lys Ala Ser Asp Leu Ile

cont.







gct caa atc gtc agg aga gga tgc tgt tcc cat cct gcc tgt aat gtg 96  
 Ala Gln Ile Val Arg Arg Gly Cys Cys Ser His Pro Ala Cys Asn Val  
                   20                  25                  30

aat aat cca cac att tgt ggt tgaagacgct gctgctccag gaccctctga 147  
 Asn Asn Pro His Ile Cys Gly  
                   35

accacgacgt 157

<210> 386  
 <211> 39  
 <212> PRT  
 <213> Conus regius

<400> 386  
 Ser Asp Gly Arg Asn Ala Ala Ala Asp Asn Arg Ala Ser Asp Leu Ile  
           1                  5                  10                  15

Ala Gln Ile Val Arg Arg Gly Cys Cys Ser His Pro Ala Cys Asn Val  
                   20                  25                  30

Asn Asn Pro His Ile Cys Gly  
                   35

<210> 387  
 <211> 157  
 <212> DNA  
 <213> Conus regius

<220>  
 <221> CDS  
 <222> (1)..(117)

<400> 387  
 tct gat ggc agg aat gcc gca gcc gac aac aaa ccg tct gac cta atc 48  
 Ser Asp Gly Arg Asn Ala Ala Ala Asp Asn Lys Pro Ser Asp Leu Ile  
           1                  5                  10                  15

gct caa atc gtc agg aga gga tgc tgt tcg cat cct gtc tgt aaa gtg 96  
 Ala Gln Ile Val Arg Arg Gly Cys Cys Ser His Pro Val Cys Lys Val  
                   20                  25                  30

agg tat tca gac atg tgt ggt tgaagacgct gctgctccag gaccctctga 147  
 Arg Tyr Ser Asp Met Cys Gly  
                   35

accacgacgt 157

<210> 388  
 <211> 39  
 <212> PRT  
 <213> Conus regius

<400> 388  
 Ser Asp Gly Arg Asn Ala Ala Ala Asp Asn Lys Pro Ser Asp Leu Ile  
           1                  5                  10                  15

Ala Gln Ile Val Arg Arg Gly Cys Cys Ser His Pro Val Cys Lys Val  
                   20                  25                  30



Arg Tyr Ser Asp Met Cys Gly  
35

<210> 389  
<211> 154  
<212> DNA  
<213> Conus stercusmuscarum

<220>  
<221> CDS  
<222> (1)..(114)

<400> 389  
tct gat ggc agg aat gca gag cga cga caa agc gtc tgt cct ggt cgc 48  
Ser Asp Gly Arg Asn Ala Glu Arg Arg Gln Ser Val Cys Pro Gly Arg  
1 5 10 15  
tct ggc ccc agg gga gga tgt tgt tcc cac cct gcc tgt aag gtg cat 96  
Ser Gly Pro Arg Gly Gly Cys Cys Ser His Pro Ala Cys Lys Val His  
20 25 30  
ttt cca cac agt tgt ggt tgacgacgct gatgctccag gaccctctga 144  
Phe Pro His Ser Cys Gly  
35  
accacgacgt 154

<210> 390  
<211> 38  
<212> PRT  
<213> Conus stercusmuscarum

<400> 390  
Ser Asp Gly Arg Asn Ala Glu Arg Arg Gln Ser Val Cys Pro Gly Arg  
1 5 10 15  
Ser Gly Pro Arg Gly Gly Cys Cys Ser His Pro Ala Cys Lys Val His  
20 25 30  
Phe Pro His Ser Cys Gly  
35

<210> 391  
<211> 145  
<212> DNA  
<213> Conus stercusmuscarum

<220>  
<221> CDS  
<222> (1)..(114)

<400> 391  
tct gat ggc agg aat gcc gca gcc agc gac aga gcg tct gac gcg gcc 48  
Ser Asp Gly Arg Asn Ala Ala Ala Ser Asp Arg Ala Ser Asp Ala Ala  
1 5 10 15  
cac cag gta tgc tgt tcc aac cct gtc tgt cac gtg gat cat cca gaa 96  
His Gln Val Cys Ser Asn Pro Val Cys His Val Asp His Pro Glu  
20 25 30  
ctt tgt cgt aga aga cgc tgatgctcca ggaccctctg aaccacgacg t 145



Leu Cys Arg Arg Arg Arg  
35

<210> 392  
<211> 38  
<212> PRT  
<213> Conus stercusmuscarum

<400> 392  
Ser Asp Gly Arg Asn Ala Ala Ala Ser Asp Arg Ala Ser Asp Ala Ala  
1 5 10 15

His Gln Val Cys Cys Ser Asn Pro Val Cys His Val Asp His Pro Glu  
20 25 30

Leu Cys Arg Arg Arg Arg  
35

<210> 393  
<211> 154  
<212> DNA  
<213> Conus striatus

<220>  
<221> CDS  
<222> (1)..(123)

<400> 393  
tct gat ggc agg aat gcc gcg gcc aac gac aaa gcg tct gac ctg gtc 48  
Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Ala Ser Asp Leu Val  
1 5 10 15

gct ccg gcc atc agg gga tgc tgt tcc cac cct gtc tgt aac ttg agt 96  
Ala Pro Ala Ile Arg Gly Cys Cys Ser His Pro Val Cys Asn Leu Ser  
20 25 30

aat cca caa att tgt cgt gga aga cgc tgatgctcca ggaccctctg 143  
Asn Pro Gln Ile Cys Arg Gly Arg Arg  
35 40

aaccacgacg t 154

<210> 394  
<211> 41  
<212> PRT  
<213> Conus striatus

<400> 394  
Ser Asp Gly Arg Asn Ala Ala Ala Asn Asp Lys Ala Ser Asp Leu Val  
1 5 10 15

Ala Pro Ala Ile Arg Gly Cys Cys Ser His Pro Val Cys Asn Leu Ser  
20 25 30

Asn Pro Gln Ile Cys Arg Gly Arg Arg  
35 40

<210> 395  
<211> 117  
<212> DNA

1 cont.



<213> Conus textile

<220>

<221> CDS

<222> (1)..(114)

<400> 395

ttt	cat	ggc	agg	aat	gcc	gca	gcc	aaa	gcg	tct	ggc	ctg	gtc	ggt	ctg	48
Phe	His	Gly	Arg	Asn	Ala	Ala	Ala	Lys	Ala	Ser	Gly	Leu	Val	Gly	Leu	
1				5				10						15		

acc	gac	aag	agg	caa	gaa	tgc	tgt	tct	cat	cct	gcc	tgt	aac	gta	gat	96
Thr	Asp	Lys	Arg	Gln	Glu	Cys	Cys	Ser	His	Pro	Ala	Cys	Asn	Val	Asp	
		20						25					30			

cat	cca	gaa	att	tgt	cgt	tga										117
His	Pro	Glu	Ile	Cys	Arg											
		35														

<210> 396

<211> 38

<212> PRT

<213> Conus textile

<400> 396

Phe	His	Gly	Arg	Asn	Ala	Ala	Ala	Lys	Ala	Ser	Gly	Leu	Val	Gly	Leu
1				5				10						15	

Thr	Asp	Lys	Arg	Gln	Glu	Cys	Cys	Ser	His	Pro	Ala	Cys	Asn	Val	Asp
		20						25					30		

His	Pro	Glu	Ile	Cys	Arg										
		35													

<210> 397

<211> 151

<212> DNA

<213> Conus tulipa

<220>

<221> CDS

<222> (1)..(120)

<400> 397

act	gat	ggc	agg	agt	gct	gca	gcc	ata	gcg	ttt	gcc	ctg	atc	gct	ccg	48
Thr	Asp	Gly	Arg	Ser	Ala	Ala	Ala	Ile	Ala	Phe	Ala	Leu	Ile	Ala	Pro	
1				5				10						15		

acc	gtc	tgg	gaa	gga	tgc	tgt	tct	aat	cct	gcc	tgt	ctc	gtg	aat	cat	96
Thr	Val	Trp	Glu	Gly	Cys	Cys	Ser	Asn	Pro	Ala	Cys	Leu	Val	Asn	His	
		20						25					30			

ata	cgc	ttt	tgt	ggt	gga	aga	cgc	tgat	gcccc	ggacc	ctctg	aacc	cagacg			150
Ile	Arg	Phe	Cys	Gly	Gly	Arg	Arg									
		35					40									

t																151
---	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-----

<210> 398

<211> 40

<212> PRT



<213> Conus tulipa

<400> 398

Thr Asp Gly Arg Ser Ala Ala Ala Ile Ala Phe Ala Leu Ile Ala Pro  
1 5 10 15

Thr Val Trp Glu Gly Cys Cys Ser Asn Pro Ala Cys Leu Val Asn His  
20 25 30

Ile Arg Phe Cys Gly Gly Arg Arg  
35 40

<210> 399

<211> 157

<212> DNA

<213> Conus virgo

<220>

<221> CDS

<222> (1)..(117)

<400> 399

tct aat ggc atg aat gcc gca gcc atc agg aaa gcg tct gcc ctg gtg 48  
Ser Asn Gly Met Asn Ala Ala Ala Ile Arg Lys Ala Ser Ala Leu Val  
1 5 10 15

gct cag atc gcc cat cga gac tgc tgt gac gat cct gcc tgc acc gtg 96  
Ala Gln Ile Ala His Arg Asp Cys Cys Asp Asp Pro Ala Cys Thr Val  
20 25 30

aat aat cca ggc ctt tgc act tgaagatgct gctgccccag gaccctctga 147  
Asn Asn Pro Gly Leu Cys Thr  
35

accacgacgt 157

<210> 400

<211> 39

<212> PRT

<213> Conus virgo

<400> 400

Ser Asn Gly Met Asn Ala Ala Ala Ile Arg Lys Ala Ser Ala Leu Val  
1 5 10 15

Ala Gln Ile Ala His Arg Asp Cys Cys Asp Asp Pro Ala Cys Thr Val  
20 25 30

Asn Asn Pro Gly Leu Cys Thr  
35

<210> 401

<211> 154

<212> DNA

<213> Conus geographus

<220>

<221> CDS

<222> (1)..(114)

<400> 401



tct gat ggc ggg aat gcc gca gca aaa gag tct gac gtg atc gct ctg 48  
 Ser Asp Gly Gly Asn Ala Ala Ala Lys Glu Ser Asp Val Ile Ala Leu  
 1 5 10 15

acc gtc tgg aaa tgc tgt acc att cct tcc tgt tat gag aaa aaa aaa 96  
 Thr Val Trp Lys Cys Cys Thr Ile Pro Ser Cys Tyr Glu Lys Lys Lys  
 20 25 30

att aaa gca tgt gtc ttt tgacgacgct gatgctccag gaccctctga 144  
 Ile Lys Ala Cys Val Phe  
 35

accacgacgt 154

<210> 402

<211> 38

<212> PRT

<213> Conus geographus

<400> 402

Ser Asp Gly Gly Asn Ala Ala Ala Lys Glu Ser Asp Val Ile Ala Leu  
 1 5 10 15

Thr Val Trp Lys Cys Cys Thr Ile Pro Ser Cys Tyr Glu Lys Lys Lys  
 20 25 30

Ile Lys Ala Cys Val Phe  
 35

<210> 403

<211> 154

<212> DNA

<213> Conus regius

<220>

<221> CDS

<222> (1)..(114)

<400> 403

tct gat ggc gca gtc gac gac aaa gcg ttg gat cga atc gct gaa atc 48  
 Ser Asp Gly Ala Val Asp Asp Lys Ala Leu Asp Arg Ile Ala Glu Ile  
 1 5 10 15

gtc agg aga gga tgc tgt ggc aat cct gcc tgt agc ggc tcc tcg aaa 96  
 Val Arg Arg Gly Cys Cys Gly Asn Pro Ala Cys Ser Gly Ser Ser Lys  
 20 25 30

gat gca ccc tct tgt ggt tgaagacgct gctgctccag gaccctctga 144  
 Asp Ala Pro Ser Cys Gly  
 35

accacgacgt 154

<210> 404

<211> 38

<212> PRT

<213> Conus regius

<400> 404

Ser Asp Gly Ala Val Asp Asp Lys Ala Leu Asp Arg Ile Ala Glu Ile  
 1 5 10 15



140

Val Arg Arg Gly Cys Cys Gly Asn Pro Ala Cys Ser Gly Ser Ser Lys  
20 25 30

Asp Ala Pro Ser Cys Gly  
35

*concluded.*